

for 3 skate

50 fms. 1 1/2 man net 23 .13 1/2, 311

3 coils boy line	75	13 1/2	10.13
6 doz. 32lb. codlines	192	20	38.40
6 " 14" "	84	20	16.80
5 gross Hal. Hooks.	80		4.00
4 balls becher	20	30	6.00
6 " linen twine 40/4		115	6.90
4 gundy rubbers		1.00	4.00
6 Trawl anchors		1.00	4.00
2 " rollers		1.50	3.00
3 14" Knives		2.00	6.00
1 " Hal. Acader		<del>4.25</del>	1.00
2 gal Sloth. Jar.		50	1.00
1/2 doz. 8" mill bastards		125	.63
#18 2 heavy Ball Trawl Officer	25		.50
1/2 Red sole boots (high)			10.00
21 10# Soft Soap.	10 @ 10		1.00
3 Skate Lops		25	75
3 " bottoms		35	1.05
1 gal ver. Jamir			2.50

# Halibut food.

- (5) July 14. (2) halibut 15 lbs (stomach contents saved.)
- (5) " " " " 85 lbs. one silver smelt in stomach
- (8) July 24 (5) " 60 " 1 skate, 1 hake, 1 sole, 1 herring
- " " " " 15 " 1 lemon sole
- (10) Aug 15 (12) one very large one, disgorged partially digested salmon.
- (11) Aug 16 9 sea anemones.
- (1) April 29 72 lb. ♀ 52" one keli aster disgorged on deck.
- (12) Aug 16 flounder in stomach do for another one.
- (2) May 28 1 lgt remains of small decapod crustacean
- (20) 4 other cartilaginous remains of small fish. saved.
- (3) May 28 1 lgt. ♂ 16 lbs. 31" x 10" young octopus in stomach
- (4) May 29 1 lgt. ♀ 42 lbs. 45 x 14 1/2", few vertebral ribs + otolith saved.
- (8) July 24 1 hake in stomach
- (6) July 20 = skate or shark. digested
- (7) July 21 skate in stomach
- (9) Aug 15 ling cod, salmon, red cod.
- (13) Aug 17 2 ft fish back bone skate, ling cod.

bably  
Pro Osmerus attenuatus  
L. 125

Prob. Synodus luciocephalus, 83 mm.  
Mercurius productus  
Hd. 100 + Bdy. 375 + 54 mm. Caudal.

Glyptocephalus zachirus. L. 210

(over)

Saline: north of the north-west of the Logger. XII. 15. June  
21-27 fms. f.g.s., f.d.s. (O. 83)

The Stomach of the only fish examined contained  
one Solea (sp?) of  $2\frac{1}{2}$  in., one Solen (sp?), one  
Eupagurus Bernhardus, and two Portunus (sp?)  
Todd, R.C.

J

July 28	65 lb, 418-16	♀	heavily ripe eggs saved —
July 21	almost ripe?	85 lb, 416" 18" ♀	
July 21	55 lb, 411.15"	♀	riper than usual
Aug 17	75 lb, 4,6 x 19	♀	eggs loose
" "	80 " 4,8 x 19	♀	partially ripe
Aug 17	30 lb, 3,4 x 13	♂	large testes very large
" 16	55 lb, 4,2 x 15 in	♀	eggs very free

July, 21.  
July, 21.  
July, 28.  
Aug., 16.  
Aug., 17.  
Aug., 17.



5518 fraggy S.  
5731 fraggy S.  
blackish

① ② ③  
④ ⑤ ⑥  
⑦ ⑧ ⑨  
⑩ ⑪ c.g. S.

5403  
L.S. (P)

+92  
5490 L.S.

5487 Cg.S.  
5486

fraggy S.  
③ ④

5706  
S. fine G. + blk. S.

④ ⑤  
Cg.S.

L.S. frags  
cont  
L.S. frags  
blk. S.  
④ ⑤  
heds.  
co frags

⑬  
med gn. S.

5568  
5569  
frag L.S.

5447 L.S.  
48 L.S.  
89 L.S. frag

5378 L.S.  
77 L.S.  
5619 blk. S.  
81 L.S. (G)

5589  
90  
L.S. (P)  
5594 fine G.

5663  
fine gn. S.

DEPARTMENT OF COMMERCE

No. 204

Ed. 6-10-13—500,000

H. 5734

The north and some  
course  
gravel

H. 5732 several

rocks up to 1 inch  
and 1 inch thick



sand quartz

might be glauconite  
which might be flaked  
when it comes out.

look up  
off sand fully half glauconite?

Shale?

organ remains

siliceous shale -

made up of organisms

*[Handwritten scribbles and marks]*

53

2116505

5367 (vs. 5386)

Ed. 6-10-13—500,000  
No. 204

also different from 5377

also branching stony spicules  
different kind of material, is fine  
sand but small stuff seems  
to be of different composition



5370

Amertone

NO. 204  
Ed. 6-10-13-500,000

DEPARTMENT OF COMMERCE

5371 see 5380  
above the last.

DEPARTMENT OF COMMERCE

5376 diatomaceous shale

5377 (5403)  
many organic remains  
probably ~~terrestrial~~ diatoms, several  
species, not ~~the~~ but organic remains  
diatomaceous shale

round, rectangular, coarse & fine  
meshed diatoms

5377 *limbstone*

DEPARTMENT OF COMMERCE

5380 north mineral shiff



DEPARTMENT OF COMMERCE

5381 Limestone (as 5383)

also banded rock  
(5403)

DEPARTMENT OF COMMERCE

5383

*Limestone*

DEPARTMENT OF COMMERCE

5384 (as 5387)

5386 (different from 5377)

pronged spicules + plain  
numerous foraminifera, dead  
and broken tests.

don't see any magnesia ~~or~~  
has feldspar + quartz.

DEPARTMENT OF COMMERCE

5387 diatomaceous shale  
slightly more sandy than 5376  
quite a bit of mineral  
material



5390 (5395) (5393)  
mean 76 in diam.  
more earthy than above



5393 (5395)

near 76 in character.

DEPARTMENT OF COMMERCE

5395 near 5376 in  
channel.

DEPARTMENT OF COMMERCE

5403 ( 5437) rec 5381 )

DEPARTMENT OF COMMERCE

5426 (5564) (5561)

X Galathea here

Seems to be

volcanic, no volcanic glass  
in it, sponge spicules, a  
radiolarian.

(great many sponge spicules +  
diatoms, more sand than mud.)

DEPARTMENT OF COMMERCE

5437

~~same thing undecomposed~~

doubtless miocene  
layers of shale + limestone  
or else concretion  
very little terrigenous  
material

5403  
(same thing holds)  
good.

calcareous ultimately  
~~diatomaceous~~ consequently  
occurs in little lumps unaffected by acid (HCl)



54172 quartz chert.

no minerals found in  
Columbia River.



5521 at narrow place  
more like southern stuff

5544 more like Columbia  
River stuff same mineral  
notation about the same.

5555- Limestone

DEPARTMENT OF COMMERCE

5561 soft blue mud

same general constituents of

5564 but in a way naturally

separated

larger grains very similar

to 5426

DEPARTMENT OF COMMERCE

5564

Bbls. 2. in Columbia River

fragments of lava

coarse sand than 5426

very closely related

minerals as in Cascade Lava

mg. minerals

Alaska

Aug. 24 Seattle 80,000 @  $3\frac{3}{4}$

(Date of Alfie Edwards trip,  
on Weeding Bros.)



America

Aug. 14, 13,000, 3 skate sea. frozen herring, (first set)

" 15 14,000

" 16 15,000

Aug. 21, Seattle, 50,000 @  $3\frac{1}{4}$ ¢ (32,000 good fish)

Daisy

July 11 Newport, 19,000 @  $3\frac{1}{4}^f$ , (3 days) || shacked (big), lingcod & salmon = 3,000 lbs. fish. 11,000? <sup>Best day</sup>

July 10, 5 skate to dory (3 dories) over night set, gurry bait,

July 13 caught 27,000 in 5 days, left for Seattle.

July 14 = 3,000 lbs. Best day 7,000 lbs

July 16 Seattle 30,000 "  $5\frac{1}{2}^f$  (5 days)

July 24, S.W. of whistling buoy where we were on July 21

July 30, in with 17,000, 5 days, did lot of prospecting.

fished outside of 30 fm. ridge, 1,500 on 4 skates in one dory  
others did not do so well.

July 30 Newport 17,000 "  $5\frac{1}{2}^f$  (5 days) Aug 7, 11 miles S.W. Yaquina ht.

Aug 12 Seattle 40,000 "  $4\frac{3}{4}^f$  (3 days) Aug 12, trip, fished 3 day = 40,000.

Aug 25 " 35,000  $4^f$  (27,000 good fish.)

Made one set, on way down for July 30 trip, under Cape Soubert,  
Took 4,000, good bottom, but fish all too small, chickens.

# Decorah

May <sup>10</sup> 18	Portland	4,500	
		<del>8,000</del>	@ 3¢
May 28	"	<sup>13,700</sup> <del>16,000</del>	" 4¢
June 18	"	<sup>22,800</sup> <del>25,000</del>	" 3¢
July 8	"	<sup>32,500</sup> <del>32,000</del>	" 3 1/4 ¢

July 22	"	21,000	
		<del>25,000</del>	" 4¢

Aug <sup>16</sup> 18	"	14,000	o.k. 3 1/4 ¢ (5 days)
----------------------	---	--------	-----------------------

Aug 22	Seattle	40,000	3 ¢ (4 days)
--------	---------	--------	--------------

Portland catches returned by Decorah.  
vide Robert A. Reid, Sec'y. Portland Press Club.

May 10, 4,500	July 16, 32,500
28, 13,700	22 21,000

June 16, 22,800	Aug 10, 14,000
-----------------	----------------

July 13, used frozen herring 6 skates to dory  
long set = 6,000 lbs. { crs. gy. S. 35 fms.  
W 3/4 N, 6 miles Yagouina Lt. }

July 14, 1,500 to dory 6 skates ea, long set  
(1/2 of 1,000 lbs, snagged in one day.)

Aug. 6, 5 day fishing came into Newport with 16,000,  
fished off light near Daisy, began Aug 2.

Aug. 15, Decorah took 10,000 (Carrol)

Aug. 16 " " 11,000 (Lt. N.E., 9-10 miles)

(4 days) (28,000 good fish.)

Aug. 26, another trip off Newport.

# Trawl Line.

## DEPARTMENT OF COMMERCE

2,400 ft = 1 skate,

8 lines = 1 "

1 line = 50 fms.

9/24,000 (265

18

6-9

400 fms = 1 skate

= 2,400 ft.

hook. 6 feet apart.

400 hooks to skate of gear.

Twelve dory boat will  
cover at one set about  
18 sq. miles of ground.

7	skates	sheath	3.18 mi.
6	"	"	2.72 mi.

# Trawl line

7-8 lines, 25 hooks 9 ft. apart.

Coll. Ref. #1<sup>8</sup> Trawls are employed almost exclusively. The quantity used to a boat varies considerably. On the upper portion of S.E. Alaska a dory will have out from 5-7 skates. A skate comprises 7 lines of 50 fms each, and each of these lines will have about 25 hooks on gangions, or side lines, ~~which are set 6 feet apart~~ ~~and each of these lines~~. The # 6283 "English" fullhook is generally used by the white fishermen. .... Ordinarily there is an anchor and a buoy at each end of a skate, but for deep-water fishing an extra anchor and buoy are placed about the middle of the skate.

In fishing the trawls are set twice a day. The first set is made at about daybreak and the fisherman commences to lift about an hour after the line has all been paid out. The next set is usually made about 12 or 1 o'clock in the afternoon and the line is allowed to remain down about an hour. In the winter season usually but one set a day is made, while only  $\frac{2}{3}$  of the usual gear is employed. The trawls are generally set in about 100 fms, (over).

although sometimes as deep as 300 fms. Fishing is continued during all stages of the tide, although some of the fishermen consider the morning flood as the best.

Large halibut are occasionally taken, one being delivered at Nome in 1904 which weighed 365 lbs. According to the superintendent at the See Harbor halibut station of the International Fisheries Co., the females appear to have well-developed eggs at all seasons of the year. This summer one of the authors opened a halibut measuring about  $3\frac{1}{2}$  feet in length and found in its stomach 22 good sized herring.

It is quite evident that the fishery in southeast Alaska at least has reached its maximum development, if it has not already begun to decline. The banks are not very extensive in this section and most of them are frequented by the fish only about six months of the year (Oct-Mar). At times the fishery is prosecuted so vigorously on certain banks that they are swept clean of halibut early in the season, and the fish are followed up so closely in their migration from bank to bank that they have no rest until upon the approach of warm weather, when they scatter and seek the deeper waters.



Zillah May

in April of He ceta (at time of with the corah) took 27,000)?

E.P. Rank { Two trips financed by W.C. Hammond and Sumner Co  
First trip Sort gear on first haul returned empty  
to S.F. and refitted

Second trip Total catch less than 6,000 lbs,

On smash up on beach an oil tank burst +  
flooded hold. All fish spoiled thereby and <sup>were</sup> have overboard

Stoke Zillah May six miles of Yag. St. Aug 5. <sup>Monday following</sup> was towed into Frisco.

# Halibut food

Alexander, A. B. Bull. Bu. Fish. XVII 1897 p141.

Cunningham, J. B. Market Marine Fish. p. 242-244

Todd, R. A. N. Sea. Fish. Invest. Comm. Rept. no. 2 South Area. 1902-1903 Lond. 1905.

Cobb, J. N. Rept. of Comm. Fish of Alaska. p 228-240 et seq.

Bait.

A.B. Alexande. Bull Bin Irish XVII 1897 p. 141.

Reproduction

see note under travel line. Coll Ref. #1.

# Food of her fishes.

May 6 stomach contents of one *P. cultratus* + two rock cod were <sup>saved</sup>.

May 7 2 skate stomachs saved.

May 8 45 in dog fish stomach contained 1 fresh herring)  
May 28 stomach contents of two black cod saved.

July 25 { 1 dog with . 2 fresh + 2 partially digested herring in stomach  
          { 1 dog "   1 herring in stomach

Aug 15 1 red fish disgorged shrimp or prawns floated away <sup>in water</sup>

5632 + July 30 nearly ripe eggs?

# Musky Fish

Sept. 24 ; Tyee ; Portlock Bank ; 50,000 ; 5 1/2 ; 20,000 <sup>Thrown out (musky)</sup>

Oct. 14 ; Stan <sup>on second last trip.</sup> ; " " 240,000 ; 70,000

" San José / Carrol ; Cape St. James ; 18,000 ; 8 3/4 ;  
 " Decorah ;

" Decorah / Purney ; " " " 28,000 ; "

" ; Tyee <sup>from the North.</sup> ; 80,000 ;



## Mushy fish

America (Booth)  $3\frac{1}{4}$ ; 50,000 = 32,000 good fish. Aug 21-14.  
Decorah " 3; 40,000 = 28,000 " " " 22-14.

Daisy (San Juan) 4; 35,000 = 27,000 <sup>(trip previous to last all sound fish.)</sup> " " " 25-14.

Athena would go down anyway; 60,000 good fish out of 100,000  
would be better than Decatur Shantz.

(over)

musky fish harder up in two weeks? } Can't be determined  
before icing noticeable  
after 3-4 days in ice

"Seed" does it, expectation that in 2-3 weeks fish harder up.

Possibly is female that is musky. Needs investigation would take many fish to determine. Tried 4 fish 2♂ + 2♀, One of each (quite) and 1 of each partially musky.

Either spent fish after spawning or else, degeneration  
preparatory to spawning, or accumulation of  
fat prior to spawning as in salmon see: U.B.F. Doc. 799  
Sept. 30-14  
most likely the latter. Fish have hard fatty lumps from size of  
small finger nail to dollar; flesh becomes of  
consistency of condensed milk. — Not so  
prevalent in northern fish!?

closed reason for musky fish? Major Alexander, diseased condition (also Dr. Moore, parasites?) warm water condition.

DEPARTMENT OF COMMERCE

Sydney Inlet. { Fish every full }

(West Coast of Vancouver Id.

70 miles from Cape Slaterry

21 miles off the Coast of Vancouver Id.

many fish caught here the last two months

According to Shiscoll are the same run of fish as caught at Newport.

(Fishermen can usually tell by the "look" of a lot of fish the locality at which they were taken.)

✓ About the same percent of mushy fish. This is the first time mushy fish have been taken at Sydney Inlet.

p. 473

There is said, however, to be one defect  
in the halibut when on the coast for  
purposes of drying & smoking, and that  
is that they have numerous white  
"gelatinous" streaks through the  
flesh.

Rept for '83

1889-91

Voeth, fish sold.

July 14	257 lbs.	\$13.15
20	401 "	21.20
23	937 "	32.05
24	478 "	23.90
25	173 "	-
26	519 "	25.80
	{ 122 "	
	{ 114 "	
Aug 4	120 "	



Small

Scales

Large

2	—
5	—
6+	—
11	—
13	—
13+	—
26	—
27	—
45	—
49	—
58	—

0
7
8+
15
20
30
30
50
55
65—

0-5  
5-10-12  
13 — 60

0-1  
2  
5

This coll

Result of catches  
Tape worms.

1, 2, 5, 3, 10, 10, 3 & 4 00597

3 a. r.

4, 6 a. r. coarse gy

13 fine gy

14, 7, 12 12 1/2

$\overset{N.P.}{26} = \overset{bot}{(14)} = 42$   
 $19 = (7) = 15 + 16$   
 $24 = (12) = 23$

Quinn. May 11-13 1913  
Chicago March 31-Apr. 3 1914

Sets  
Comparable:  
May 27 (July 20)  
XIII + XIV

(May 11) (May 12)  
Quinn's 2 and 3

(April 3) May 6.  
Chicago (7)? om. V

May 13  
Quinn's 5  
Our. I XI May 29  
↑? info to there  
Quinn's 6 to hr. X?  
May 13 May 28

Daisy set outside of ridge and  
our No. V

Quinn's + Daisy's set under  
Capelookout

Shind trip

XXXI  
fine gy. S.  
slime as  
off Coos Bay

(Newport) ~~Seal~~  
~~1/2 bad N.G.~~ good?

XXXII  
brk bot  
good.

~~NG.~~  
~~brk. bot good~~  
XXXIII  
hrd gn Mud  
blk. S.

~~crs. S. G.~~  
~~good~~  
XXXIV

~~fine gy. S.~~  
~~N.G.~~  
XXXV

no fish only dogs prior to May 8 Ours

Chis. Mar 31 - Apr 3

May 11 Quinn

but one patch had touched Set no I Apr. 29.

none on sets II, III, IV, V, VI.

Second trip May 27.

S.N.G.  
VIII

N.G.  
IX

part N.G.  
X

good  
XI

but no fish may have already moved in on banks, questionable

Newport work

① Trial rule out

XII

brk good

XIX

②

XIII

good

XXIII

③a

XIV

fine S.  
N.G.

③b

XV

good

brk good

XXIV

XVI

fine S.N.G.

XXV

XVIII

brk. good

XXVI

# Newport, Oregon, small boats.

Sea Dog — Pilgrim — Orabell — U&I

✓ July 13,

3 halibut, 2 redfish

7 halibut (40-50 lbs), 3 redfish, 3 ling cod.

✓ July 20

1 halibut

✓ July 21

2 halibut

✓ July 28

29 halibut

✓ Aug 4

8 "

✓ Aug 14

1500  
~~1500~~ lb halibut.

✓ Aug 15

1900 lbs. halibut

✓ Aug 16

1400 lbs. halibut

4800 henpar.  
about 5,000 lb.



# Halibut Cruise of 1911.

Bottom	Fish taken on	no. of hauls successful	No. of unsuc- cessful hauls	Total hauls	Counting Total hauls	Percent Unsuccess- ful hauls.	Fish per haul of Successful
					Fish per haul		
Rocky	165	38	10	48	<del>3.43</del> (4.34)	x 21 %	3.43
Gravel + Sand	64	13	2	15	4.26	x 13 "	4.92
Sand	39	5	6	11	3.83	x 54 "	7.80
Mud	23	4	5	9	2.55	x 55 "	5.75
Gravel + shells	10	3	1	4	2.50	x 25 "	3.33
Rocks + mud	9	2	1	3	3.00	x 33 "	4.50
Shells	9	2	2	4	2.25	x 50 "	4.50
Shells, gravel + mud	7	1	0	1	<del>7.00</del>	x 0 "	7.00
Sand + mud	3	1	5	6	<del>.50</del>	x 83 "	3.00
	329	69	32	101	3.25	x 32 "	4.77

S.F. Light ship must have quite a series of Observation hydrographic.

Bait fresh octopus; fresh halibut; fresh cod; fresh Salmon.

# Fishermen

Edward Driscoll

R.F.D., Box 58 Centralia, Washington.

Friis

2716 Western Ave., Seattle.

Richard

Gladney

1625 Boylston Ave., "

Michael

Burke

Wiltshire Hotel "

Richard

Keough

No. of set.	No. of fish <sup>①</sup>	No. of fish <sup>②</sup>	Average <sup>①</sup>	Average <sup>②</sup>	Total <sup>①</sup>	Total <sup>②</sup>
27	2	5 <sup>##</sup>	16.0	26.4	32	132-114-120 <sup>⑨</sup>
8	3 <sup>(##2)(138)(0010)(690)</sup>	5 <sup>°</sup>	23.0	48.0	69	265 <sup>°</sup> -216-173 <sup>⑥</sup>
33	3 <sup>(□□12)(828)</sup>	9 <sup>✓</sup>	55.0	39.4	165	355-305 <sup>⑬</sup>
29	3 <sup>(0112)(247)</sup>	18 <sup>xx</sup>	36.3	18.2	109	327 <sup>xx</sup> -281 <sup>⑩</sup>
5	4 <sup>#15(1635)</sup>	18 <sup>*</sup>	14.2	22.0	67	397 <sup>*</sup> -342-336 <sup>⑧</sup>
3	4 <sup>(xx5)(335)</sup>	27 <sup>□</sup>	22.0	20.7	88	559 <sup>□</sup> -481 <sup>⑫</sup>
9	5 <sup>(x4)(352)</sup>	29 <sup>°°</sup>	21.6	23.7	108	687 <sup>°°</sup> -591-478 <sup>⑤</sup>
32	7 <sup>(□5)(540)</sup>	29	37.0	32.0	259	934 <sup>△</sup> -804 <sup>⑭</sup>
1	9 <sup>(△4)(1036)</sup>	36	30.8	20.0	296	720 <sup>△△</sup> -620-401 <sup>③</sup>
4	8 <sup>(△△4½)(706)</sup>	36	19.6	22.7	157	817 <sup>□□</sup> -693-519 <sup>⑦</sup>
34	9 <sup>(✓)</sup>	38 <sup>x</sup>	32.1	21.4	289	813 <sup>✓</sup> -699 <sup>⑪</sup>
28	13 <sup>(x3)(1115)</sup>	45 <sup>#</sup>	28.8	41.5	375	1867 <sup>#</sup> -1606-937 <sup>④</sup>

# Whales.

Apr. 12 Under way at 6.00 a.m.

Apr. 13, 1 whale.

Mod. sea.

3-4 sticker common porpoises (*L. obliquidens*)

Apr. 14 mod. sea. 12-4 fresh S.E. gale. dr 4-6. at 12.26 hove to

Apr. 15. R. sea. 8 a.m. - noon. heavy squall with hail passed over in mid water.

Aug. 29 saw <sup>about</sup> 6-10 whales. some at least 30 ft from tip to tip of tail

Sept. 1 see whales each day.

Sept. 5 Saw 2-3 whales all day.

1911

Oct. 1911

Oct. Pac fish page 17.

report sent out Oct 4 range

station has already handled

197 whales this season.

Mar. 14 - 1912

Mar. killed first whale  
of season, Calif. humpback  
Grays Harbor

Rec'd with Mr. Allen 1912 p. 24



Sept 1912

Sept 1912

Grays Harbor Whaling

Patterson 54

Westport 52

Abideen 36

man 70

2

largest of year 78 feet long.

works bet 15' bottom &

soot-soot.

---

all Pacific

Gay - Lumber for up the loth

368 whole 17 1/2

nr 1912

Weidinger has still in Com.

1912 Cal aty when

Grays Harbor 217.

Jan 1913

# Scallops Trials

July 20 (3b) 9.55, 20 min Tow 1 jelly fish, large with brown streamers  
" 10.35 30 " few worm tubes encrusted with eggs  
" on hand line while drifting through 10.35 haul  
picked up 1, 6 in. scallop on hand line.

July 24 (5) 11.00 15 min Tow = 1 scallop. 1 6 inch.  
11.30 " " " = blank.  
12.00-12.30 = "

Aug 6 (10) 10.45, 45 min Tow 1 star fish + worm tubes in net.  
12.30, 1 hr. = blank.

Aug 14 (11) 1.40, 20 min = 2 scallops "3 in" and "7 in" in dia. + worm tubes with eggs  
2 scallop Towl 11.45 - 1.45 blank. only over to anchor.

Department of Commerce and Labor

Introduction

Natural History of giant scallop.

Geographical range.

Botanical " "

Description

Size growth and death, habits.

Parasites.

---

The fishery

Origin development + present condition

Apparatus + methods of capture

Vessels or boats employed

Fishing grounds

Fishing season.

Results of fishery 1887, 1888, 1889

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The Uses of the Giant scallop.

Food value.

Uses of scallop for bait

Utilization of shells



2 Preparation of products, markets etc.  
Handling, catch, shipment etc.  
Markets.  
Prices.



# Weather

July 14 held up one hr. by rough bar + fog.  
15 uncertain + fog.

20 Hazy weather inclined to be foggy some of the sea moderate swell.  
21 Windy clear, increasingly hazy + cloudy toward evening  
25 Very foggy + misty all morning, left at 12.40 p.m.  
caught out over night heavy fog.

Aug 4 Very windy + choppy.

Aug 7 Very foggy one of most foggy yet.  
14 Bearly overcast.

Aug 29, Very foggy could hardly see 3 miles if that.

Midnight Sunrise from Sunset

DEPARTMENT OF COMMERCE

Date	Direction	Force	Weather	Barom.	Therm.	Wind
July 13	N N	1	Cloudy	30.00	47	St
	S W	2	"	30.10	50	Mod
	S W	2	"	30.05	64	"
14	N W	1	Hazy	30.10	55	St
	N W	1	"	30.10	48	Mod
	N. W	1	Foggy	30.15	54	"
	"	2	Clear	30.10	64	"
	Calm	—	Sunfog	30.15	60	"
15	N N	1	" "	do	52	"
	"	4	Hazy	30.20	68	"
	"	8	"	30.15	67	"
	"	8	"	30.05	53	Rough
16	"	4	"	30.05	52	"
	"	4	"	30.15	66	"
	"	7	"	30.05	57	"
	"	8	"	30.00	51	"
17	"	3	"	30.10	50	Mod
	"	2	Foggy	do	54	"
	"	4	Hazy	30.00	56	"
	"	7	"	do	50	"

DEPARTMENT OF COMMERCE

Date	Wind Direction	Force	Weather	Barom.	Therm.	Surf
July 18	NN	3	Hazy	30.05	50	Mod.
	"	2	Foggy	do	54	"
	"	8	Hazy	do	56	"
	"	6	"	29.95	52	"
19	"	4	"	do	do	"
	"	2	"	30.00	56	"
	"	7	Foggy	do	do	"
	"	4	"	do	48	"
20	"	2	Hazy	30.05	do	"
	"	1	Cloudy	30.10	56	"
	"	6	Hazy	30.15	62	"
	"	2	"	30.10	54	"
21	"	2	"	30.15	48	"
	"	1	"	do	64	"
	"	6	"	30.10	do	"
	"	7	"	do	54	"
22	"	2	"	30.15	49	"
	"	1	"	30.10	60	"
	"	8	Clear	do	55	"
	"	7	"	do	49	"

No. 203

Ed. 2-21-14-200,000

# DEPARTMENT OF COMMERCE

Date	Direction	Force	Weather	Barom	Ther.	Surf
July 23	NW	2	Clear	30.15	47	Mod.
	"	2	"	do	52	"
	"	6	"	30.10	53	"
	"	4	"	30.05	48	"
24	"	4	Hazy	30.10	48	"
	"	2	"	do	59	"
	"	4	"	30.05	60	"
	Calm	—	"	30.00	46	"
25	"	—	Foggy	do	do	"
	NW	2	"	do	50	"
	SW	2	Rain & fog	do	64	"
	Calm	—	dense fog	29.90	50	"
26	Calm	—	do	29.95	47	Light
	NW	1	do	30.00	46	"
	do	2	Fog intermittent	do	66	"
	"	2	Clear	do	56	"
27	Calm	—	do	30.05	53	"
	"	—	Foggy	30.10	50	"
	NW	4	Clear	do	60	"
	"	5	"	do	52	"
28	"	2	"	do	do	"
	"	1	"	do	58	"
	"	7	"	30.05	"	"
	"	6	Hazy	30.00	54	Mod.



# DEPARTMENT OF COMMERCE

Date	Actin	Force	Weather	Barom.	Therm.	Surf
July 29	NW	2	Hazy	30.00	47	Mod
	Calm	—	dense fog	do	57	"
	NW	6	" "	29.90	54	Light
	"	5	" "	do	50	"
30	"	1	Foggy	do	49	"
	"	2	"	29.95	46	"
	"	4	"	30.00	59	"
	"	2	Hazy	30.05	54	"
31	Calm	—	"	do	49	"
	NW	2	"	30.10	68	"
	"	6	"	do	60	"
	"	2	"	do	50	"
Aug 1	"	2	Foggy	30.20	"	"
	Calm	—	"	do	49	"
	NW	6	Hazy	30.05	55	"
	"	6	Foggy	do	50	"
2	"	2	dense fog	do	46	"
	"	1	do	do	49	"
	"	6	Foggy	30.00	64	"
	"	7	"	29.95	50	Mod.

# DEPARTMENT OF COMMERCE

Date	Dir	Force	Weather	Barom.	Therm.	Surf
Aug 3	NW	6	Foggy	29.95	49	Mod
	"	4	"	30.05	56	"
	"	6	Hazy	do	"	Light
	"	4	"	30.10	51	"
4	"	4	Cloudy	30.15	49	"
	"	2	"	30.20	47	"
	"	6	Hazy	30.00	55	"
	"	6	"	do	49	"
5	"	2	"	do	46	"
	Calmer	—	Some fog	do	50	"
	NW	4	Hazy	do	57	"
	"	2	"	30.05	55	"
6	A	2	"	do	51	"
	"	1	Foggy	do	56	"
	NW	3	Cloudy	30.10	61	"
	NW	2	Hazy	do	58	Rough
7	"	2	Foggy	do	47	"
	E	2	Hazy	30.15	58	"
	NW	6	Cloudy	30.10	56	"
	"	2	Hazy	30.05	54	"



# DEPARTMENT OF COMMERCE

Date	Dir	Force	Weather	Barom.	Ther	Surf
Aug 8	NW	1	Hazy	30.10	46	Rough
	"	1	"	30.05	51	"
	"	4	"	do	60	"
	"	6	"	30.00	54	"
9	"	5	"	30.10	50	"
	"	2	Dense Fog	30.05	"	"
	"	7	do	30.00	52	"
	"	7	Foggy	29.90	50	"
10	"	6	Dense fog	do	45	"
	"	2	do	30.00	"	Mod.

DEPARTMENT OF COMMERCE

	Dir	Force	Weather	Surf
Aug 10	NN	6	Ans fg	Rough
	"	7	"	"
11	"	4	"	High
	"	1	"	"
	"	8	Foggy	"
	"	7	Ans fg	"
12	Calm	7	"	Rough
	NN	1	"	"
	"	6	Hazy	"
	"	3	Ans fg	"
13	"	3	"	"
	AN	4	"	"
	"	5	"	Mod
	"	3	Foggy	Sight
14	"	2	"	"
	Calm	—	"	"
	AN	2	Clay	"
	"	1	"	"
15	"	1	"	"
	"	1	"	"
	"	2	"	"
	Calm	—	"	"

# DEPARTMENT OF COMMERCE

Aug 16	Calm	—	Cloudy	Slight
	"	—	"	"
	W	2	Clear	"
	Calm	—	Hazy	"
17	"	—	Cloudy	"
	"	—	"	mod.
	NW	St	"	Ser
	"	5	Hazy	Slight

Comparison of otter trawl and lines.

Early part of 1906 = Cobb. Fish. of Alaska, report of Comm.

Driscoll = 100,000 lbs. on lines; 12,000 lbs. in otter trawl.

Cobb Ref. ② But little halibut fishing is carried on in Alaska during the summer months, as halibut is then coming into Puget Sound ports in abundance from the fleet operating off Cape Flattery, Washington, and the fish moreover are in the deeper waters where they are more difficult to catch. The price is low also at this time. A few local vessels make short trips and fetch their catch, but the low prices received for fish prepared in this way during the past two years offers little inducement to the enterprise.

Cobb Ref. ③ The Atlantic fishermen made good catches in the spring & summer and the eastern market thus became glutted, so that prices dropped until many of the Pac. fishermen either ceased fishing for the time being or restricted the amount taken.

The experiment of using steam trawlers in Atlantic waters the last year or two created considerable interest among the Pacific

halibut fishermen, and in the early part of 1906 two steam  
haukers <sup>were</sup> fitted out by a British Columbia co. to work on the  
banks along that coast. The attempt was abandoned after  
several months, however, having proved unprofitable. Ac-  
cording to the reports of the masters of these vessels, the halibut  
was too cunning a fish for them, and would avoid the haul  
without apparent effort. This was especially noticeable  
when the haul was operated in the vicinity of the dory fishermen.  
While the latter would be making good catches, the hauls would  
make hauls containing but few halibut and a quantity of small  
fish of other kinds, for which there is no market on the Pacific  
coast. Both of the steam haulers are now being fitted out for  
dory fishing.



July for Steam hunter  
at Vancouver "Orontes" arrives

July 1912.

~~Oct. 1912.~~

Nov. 1912 page 40

Nov. 1912.

British Harbor reach count.

Triumph 121 Ts. 124 feet.

Canada 166 Ts 100 feet.

each has 9 Grindery fishermen under two years  
contract

Ilec. hr. page 20  
descent of shooting other hand

Ilec. 1912.

Steam  
Snawles Kailashing Jan. 1912  
Oct Jan. 1912.

W. G. H.  
H. G. H.

Sept. 1913

Feb. 1913

Tranben Geo & J. inst

Andrew Kelly, married L

Vic. Jan. 13.

Apr 1913 page 26 Pac. Fish.

April 1913

Vancouver, B.C. March 27.

According to all accounts the B.C.  
Fisheries Co. Ltd. will abandon the  
use of trawls on its Grimsby  
steamers *Triumph* & *Canada*. The  
latter vessel arrived at Victoria  
from the Hecate Strait a day or  
two ago and is being fitted up  
with dories like the *Ortho Canada* &



Apr. 1913 Pac Fish.

American vessels. It is understood that the other boats which are being brought out to the Pac. Coast to engage in the halibut trade will be similarly equipped with doors & lines. To replace the hauling nets with which owing to the rocky & jagged seabed of the coast waters have been found unsuccessful. The company has been put to considerable expense in consequence of the damage to the nets and it is stated that springs will also be fitted out with doors.

Expected to Andrew Kelly  
George Foster James Carruth  
will have doors in spring

Fig. 3.

on these views.

Fig. 18. View showing the two parts of the door cast together with outside lower panel & rabbets for glass pane cast in, as an alternative method to that shown on this sheet.

Fig. 3.  
on these views.

-Fig. 18. View showing the two parts of the door cast together with outside lower panel & rabbets for glass pane cast in, as an alternative method to that shown on this sheet.

June 14. In Capt Wm Quinn  
July 1913.  
note on Newport fish

Capt Wm Quinn was  
sent, brought Canada and  
from England, but reduced  
in pay when converted to  
long fishing July 1913.

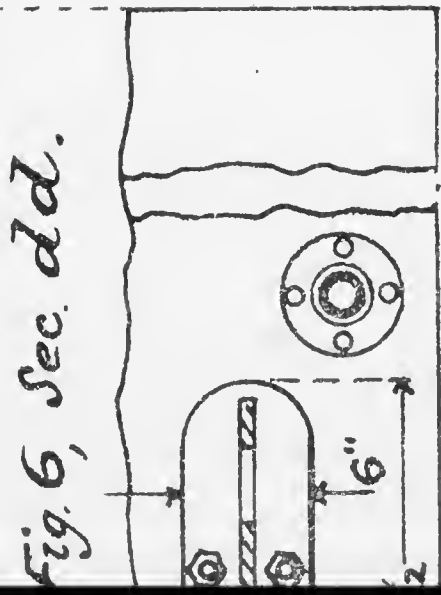
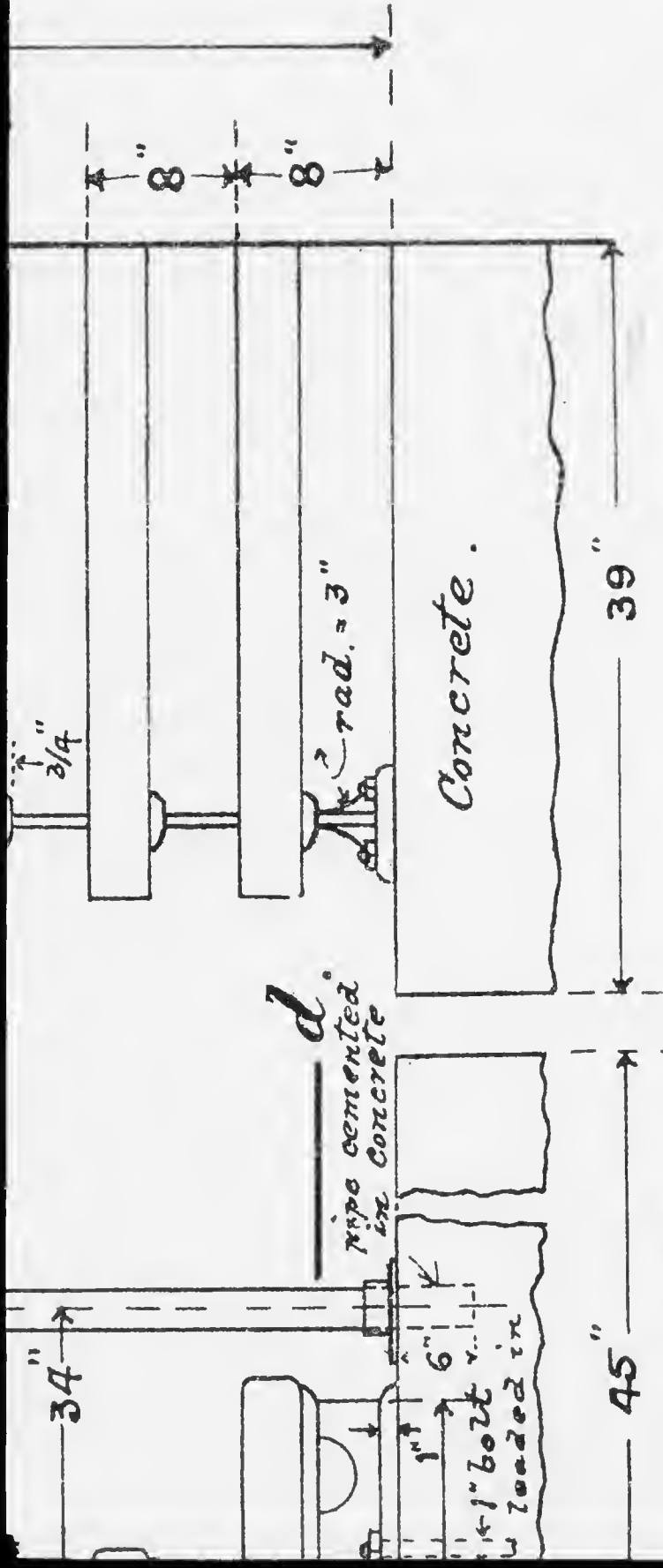


Fig. 6, Sec. dd.

Second floor window.

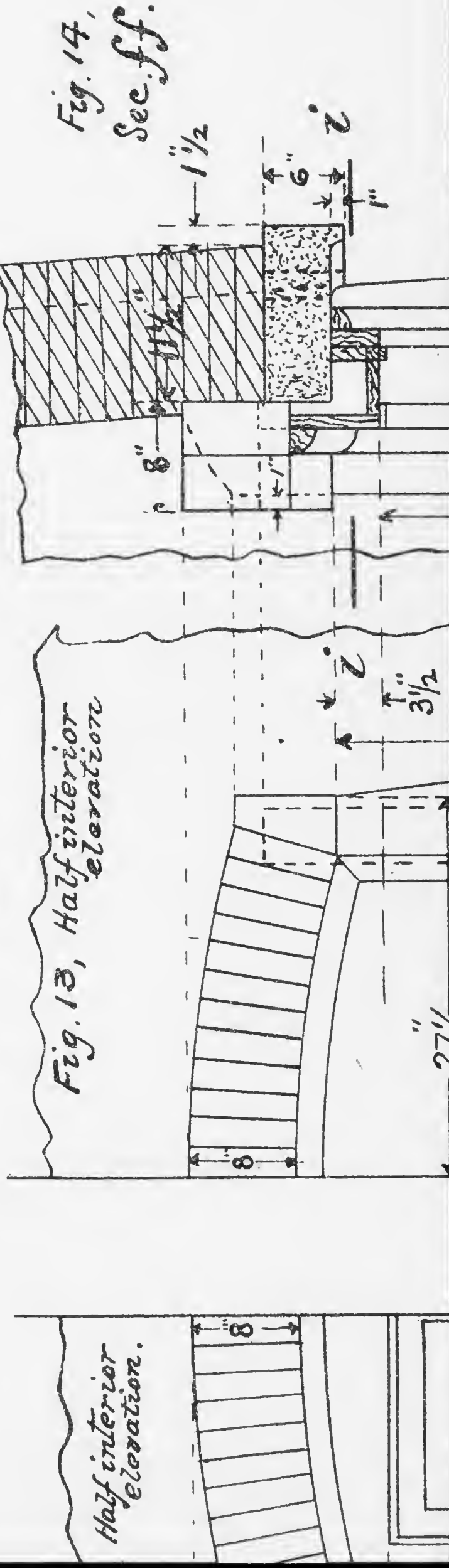


Fig. 17.  
Sec. ff.

May 1913 p. 25 Pac. Fish

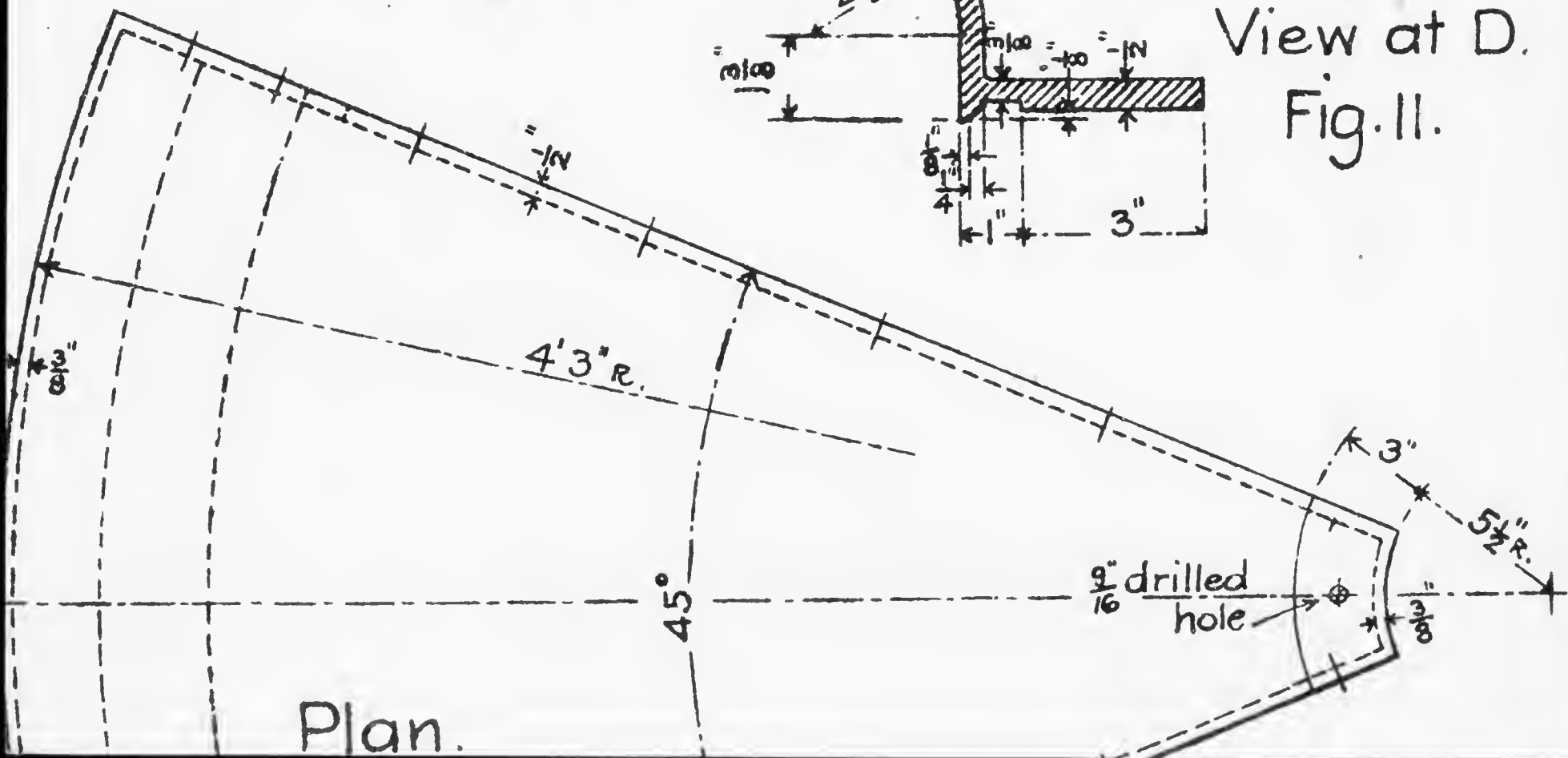
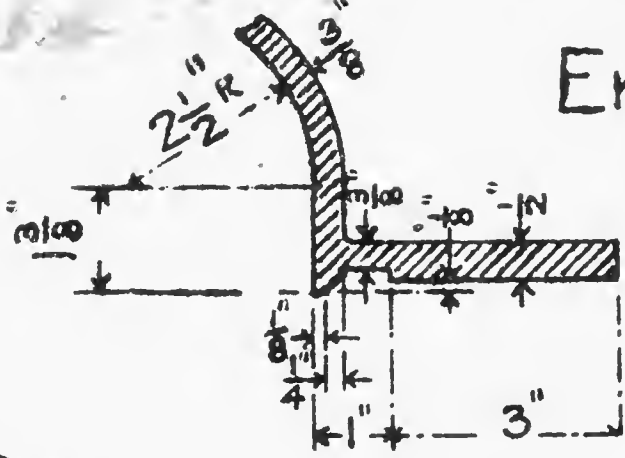
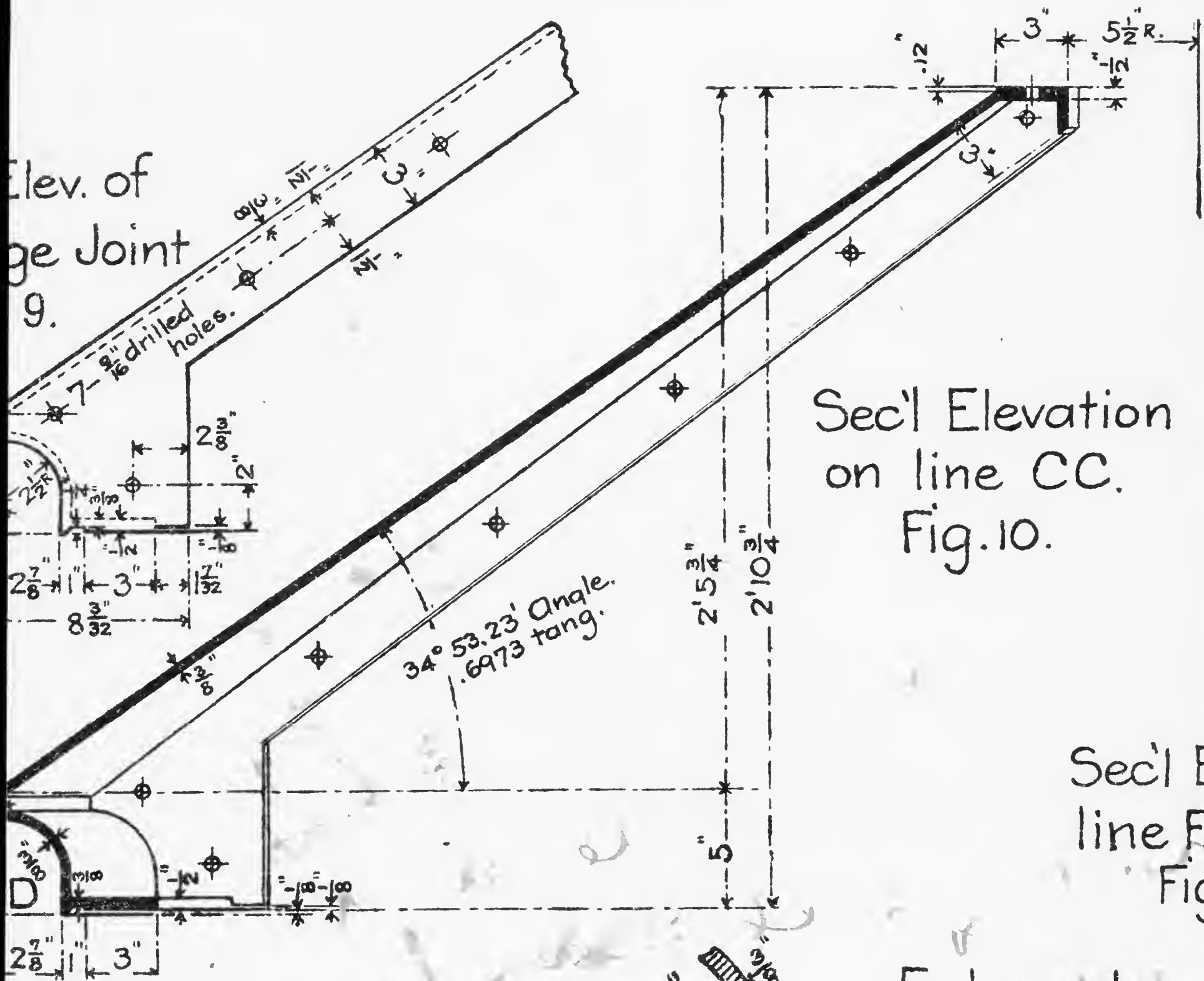
Mr. G. M. Alford, man. of the Standard Fisheries Co., believes that the time will come eventually when hauling will be practicable, with the growth of the market for sole, skate and other fish not demanded very much at present.

Mr. Alford claims that his co. was the first to take up hauling in recent years. Their experience, however was that hauler was so small in proportion to the catch of the cheaper fish unmarketable fish that it was not profitable. It has been asserted that the nets were torn but the real reason is said to be because of the unmarketable fish.

That the market will however

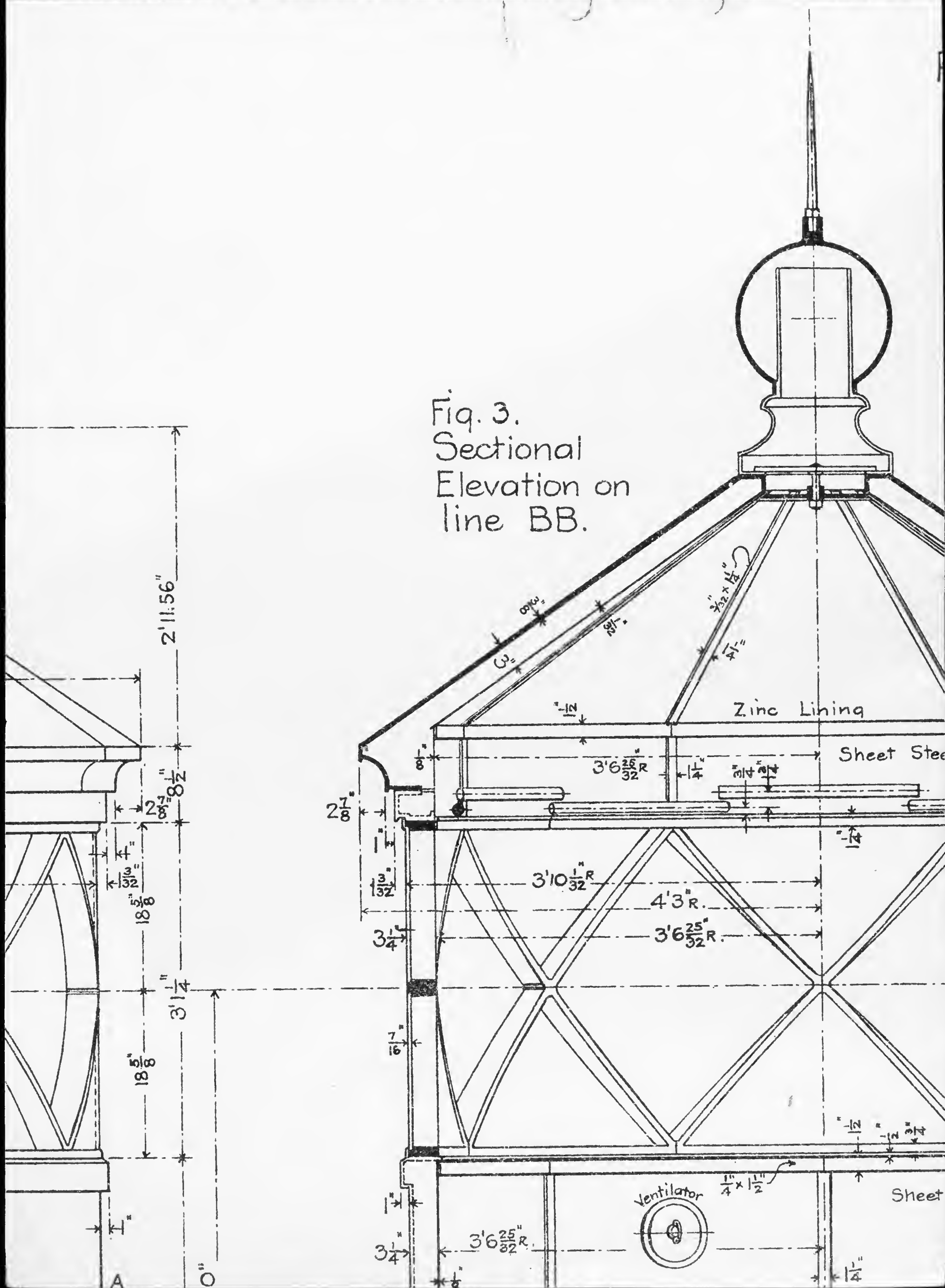


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May 1913 p. 25 Pac Fish  
now for the cheaper fish, just  
as it has done in England. is  
the opinion of Mr. Alfred. Most  
householders he says are not  
aware of how cheaply one can  
live from fish, and in these days  
there is not the incentive to  
forsake beef for the cheaper fish  
from the prosperity that the country  
enjoys. ~~Wholesale~~ He declares  
fish will be more in demand  
and trading will again be  
taken up.

[illegible][illegible]

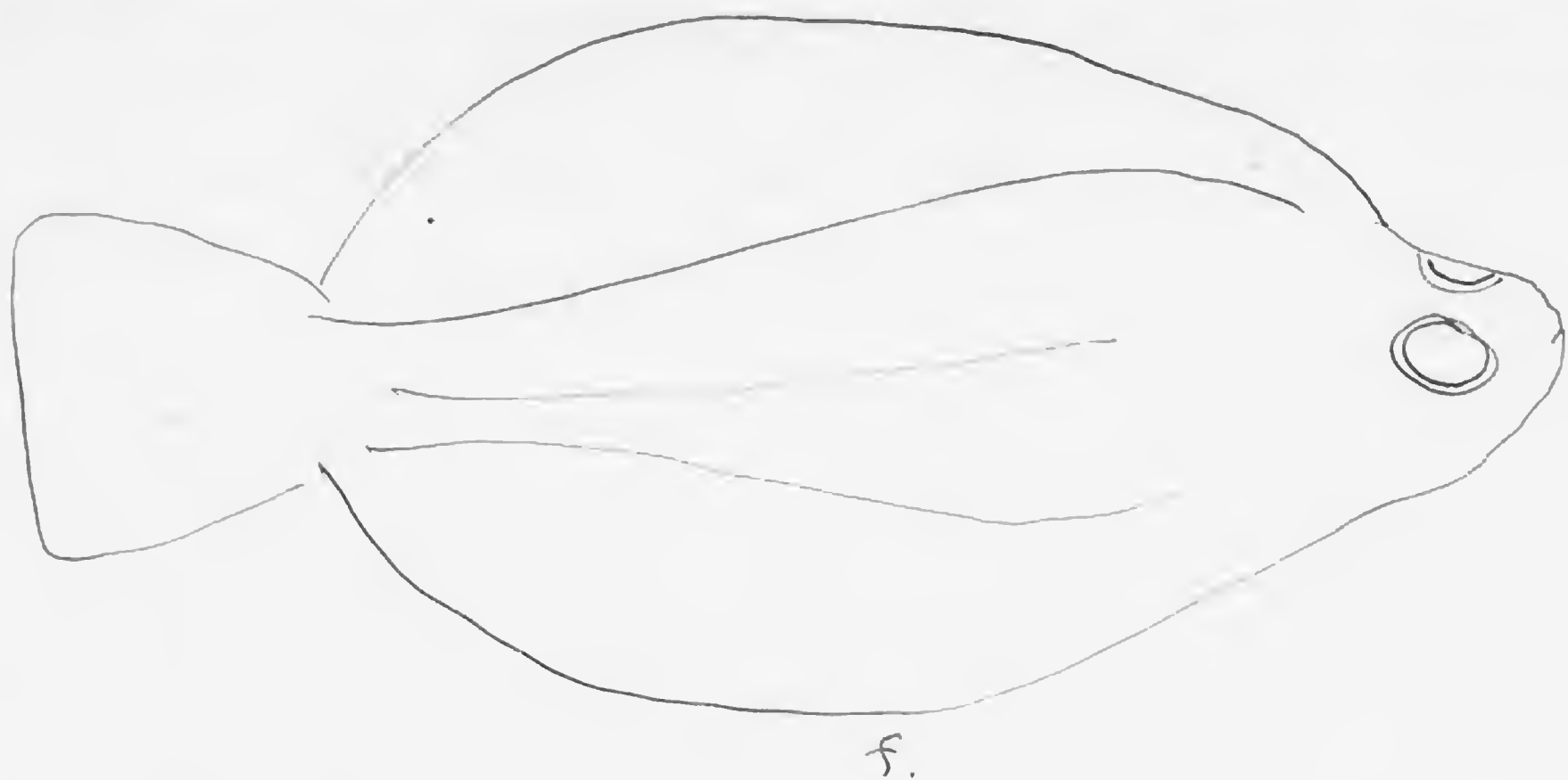
\* *Hippoglossus vulgaris* Linn.

Fig. 72.

a.	Larve vom	22.5.04.	13,5mm.	Lanz westlich der Färöer
b.	"	" 20.6.04	16.25."	" Dänemarks Strasse
c.	"	" 20.6.04	18	" - - - - -
d.	"	" 19.6.04	22	" - - - - -
e.	"	" 20.6.04	27	" - - - - -
f.	"	" 9.7.04	34	" - - - - -

nach. Joh. Schmidt.





- \* 1875 Collett, R. Norges fiske p. 134 (ist nicht ~~Aythya~~ ~~condem~~ ~~Plem.~~ cynoglossus).
- 1892 McDutch, W.C. 10<sup>th</sup> annual rep. fish. board S. Scotland p. 285-7.
1893. dr. Ebenda 11<sup>th</sup> report p. 244
- 1893 Petersen C. G. Joh. Rep. of the Danish biological station IV p. 130, pl II, fig 21? (fig 20 ist Pl. cynoglossus.).
- 1904 dr. ~~meddelelsen~~  
meddelelsen f. Kommissionen f. havunder-  
søgeiser. Serie fiskeri Bd. 1, p. 3.
- 1904 Schmidt, Johs., Ebenda Bd. 1. 3 p. 5-8  
pl. I fig. 5-12.



Der Heilbutt wird fast auf allen wichtigen Fischgründen in Eisener sowie in Herden des atlantischen und pazifischen Ozeans angetroffen. Im atlantischen Gebiet geht er südwärts bis zur Biskaya, ostwärts bis zur Murmanküste. In der westlichen Ostsee ist er vereinzelt beobachtet, bei Island ist er häufig und bei Grönland wohl bekannt. Auf den Fischgründen vor der ostamerikanischen Küste einschließlich der Newfoundlandbänke spielt er eine sehr große Rolle.

Die Laichzeit fällt in der Nordsee (?) und an den skandinavischen Küsten in die Zeit von Ende Februar bis Mai, besonders April bis Anfang Mai, bei Island in den Juni bis August.

Die Eier sind ziemlich sicher freischwimmend; doch sind sie als solche noch nicht gefangen, jedenfalls noch nicht beschrieben worden, vielmehr nur aus dem reifen Ovar bekannt. Es sind wahrscheinlich die größten planktonischen Eier, welche existieren, ~~ist~~ ihr Durchmesser beträgt wohl wohl 3.1 bis 3.8 mm. Sie haben einen komoformen Stöter ohne Öl und eine zähe Eihaut, aber wahrscheinlich keinen perivitellinen Raum von erheblicher Größe. Über ihre Entwicklung ist nichts bekannt.

Auch über die Larven ist erst in neuerer Zeit Sicheres bekannt<sup>(4)</sup> geworden. Zwar hat G. O. Sars im August 1871 in der großen Tiefe vor Christiansund eine noch fast symmetrische Plattfischlarve erbeutet, die zuerst von Collett (l. c.) beschrieben und später von C. G. Johs. Petersen (l. c. fig. 20) auch abgebildet wurde und von beiden als zum Heilbut gehörig angesehen wurde. Doch handelt es sich nach Petersens eigenen neueren Erklärungen hierbei sicher um einen *Pleur. cynoglossus*. Indessen hält Petersen es für möglich, dass die von ihm am gleichen Orte als *Platysonatichthys* abgebildete und bei Grönland gefangene Larve vom 51 mm. Länge als *Hippoglossus vulgaris* anzusehen ist.

Die einzigen zuverlässigen Beschreibungen und Abbildungen von Larven des Heilbut hat Johs. Schmidt (l. c.) in neuester Zeit gegeben. Sie beziehen sich auf Entwicklungsstadien von 13.5 bis 34 mm. Länge, welche bei Island und den Färöer vom Ende Mai bis Anfang Juli gefangen wurden.

Die jüngste Larve (Fig 72a) besitzt außer der kypuralen Anlage der Schwanzflosse noch keine sichtbaren Flossenstrahlen. Die eigentümliche aufgestülpte Schnauze verleiht dem Fischchen ein sehr charakteristisches Aussehen. Die Larvalen Brustflossen sind ziemlich groß



desgleichen die Augen. Das Pigment ist ~~da~~ sehr schwach <sup>(5)</sup> und seine Verteilung wenig charakteristisch. Es findet sich in einigen zarten Längsreihen auf dem Körper und in kleinen Ansammlungen am Rande der Flossensäume. Vorderkörper und Kopf sind fast pigmentfrei; neben dem schwarzen Farbton ist rot an den Rändern der Muskelsegmente in äußerst zarten Pünktchen vertreten.

Das nächste Stadium von 16.25 mm. Länge (Fig 72 b) zeigt nur geringe Fortschritte in der Entwicklung. Die Notochorda ist stärker aufgebogen, die Flossenträger werden deutlich an der Basis der Flossensäume. Die Zahl der Wirbel, welche Vert: 16 (17) + (32) (33) 34 (35) beträgt, lässt sich bereits feststellen.

Beim folgenden Stadium von 18 bis 20 mm. Länge (Fig. 72 c) geht die Entwicklung der Stahlen in den unpaaren Flossen weiter, aber erst bei 22-23 mm. Länge (Fig 72 d) lässt sich ihre Zahl einigermaßen feststellen: A: 71-83, D: 96-108. Inzwischen erscheint das linke Auge bereits deutlich aufgerichtet. Die Bauchflossen sind als zarte Knospen sichtbar. Das Pigment beginnt jetzt sich in Gruppen zu sammeln, von denen auf der Analflosse drei ziemlich deutlich sind. Dieser Prozess macht in der Folge weitere Fortschritte.

Par.  
Bei 27 mm Länge (Fig. 72e) sind auf der Afterflosse 4 ⑥  
Pigmentflecke in ziemlich gleichen Abständen sichtbar  
und dazwischen kleinere intermediäre, ferner auf der  
Rückenflosse 5 bis 6 grössere Gruppen, zwischen denen  
ebenfalls kleinere liegen. Der Rand des linken  
Auges ist jetzt über der Körperkontur sichtbar. Die  
Brustflossen sind noch strahlenlos und gross, die  
Bauchflossen deutlicher geworden. Die ganz  
pigmentlose Schwanzflosse ist vollkommen ausge-  
bildet.

Allmählich beginnt nun auch das Pigment auf  
dem Körper und eine schon früher sichtbare An-  
sammlung auf der Stirn deutlicher zu werden, was  
bei den 30 mm. langen Sarven erkennbar ist, <sup>und</sup> noch besser  
bei der grössten bisher bekannt geworden planlonischen  
Sarven von 34 mm Länge (Fig. 72f) hervortritt. Bei  
dieser ist das linke Auge nahezu auf der Kante  
angelangt. Die Brustflossen sind noch immer  
~~sehr~~ sehr gross, ebenso die Schwanzflosse, ~~wo~~ welche  
hinten gerade abgeschnitten ist. Das stark vermehrt  
vermehrte Pigment ist auf der rechten Körperseite  
reicher als auf der linken und verleiht dem ~~ganzen~~  
inzwischen weniger durchsichtig gewordenen Fischchen  
ein marmoriertes Aussehen. Auch auf den unpaaren  
Flossen ist das Pigment sehr vermehrt und selbst auf



der Schwarzflosse sind in basalen Teil der-  
selben 2 kleine Ansammlungen aufgetreten. (7)

Die Körpergrösse, in welcher die meta-  
morphose abgeschlossen ist, und das Leben  
am Grunde beginnt, ist ~~noch~~ bekannt.

I. 177-180

Nordischer Plankton,

I. Eier und Larven von Fischen

1. Teil Von Prof Dr. E. Ehrenbaum,  
Helgoland.

Herausgegeben von  
Brandt und Apstein.

Keil und Leipzig - 1905

~~This is a Report. Laguna Marine Lab.  
at Long~~

~~Pomona College  
May 1912~~

~~Pub. by Dept. Biol. Pomona College  
Claremont Calif.~~

~~Coll - Luning fish~~

Jordensbjoeld

Will J. Thompson Sanford Univ.

(The Provincial Fisheries Dept. of  
British Columbia

See Pac. Fisherman Nov. <sup>19</sup>14 p. 84.

Females grow ~~more~~ rapidly & attain  
larger size than males.

Reach 81x years of age.

~~males~~ <sup>males</sup> 40-44 in. ♀ at 60.

Av. ♂ length 34.8

" ♀ " 38.3

One or other sex predominates at given  
time or place. Proportion ~~also~~ varies  
on successive days.

Proportion of head into body length of  
fish from various places seems to  
indicate occurrence of local races.

Halibut Food  
DEPARTMENT OF COMMERCE

Halibut 1 Solea 1 Eel 1 Eupagrus bernhardus.

R. A. Todd.

The halibut feeds ~~on~~ <sup>on</sup> fish + crustaceans  
J. T. Cunningham

It is known to live mostly on other fishes, but it  
also takes crustacea ~~and~~ I have found the remains  
of sea urchins in its stomach

J. Wemyss Dillan

Sand lance ~~and~~ + crabs. A. B. Alexander.

small halibut eat crabs and sand lance  
in shallower water  
on banks <sup>removed</sup> ~~away~~ from shore live gray  
cod is principal food.

Range of crabs, sea anemones, star-  
fish, sand lance, dog fish, cod, rat fish and  
an occasional red cod.

arrow toothed halibut, octopus

57 90 57  
590

M. H. B.

Will C. Thompson; Stanford.

DEPARTMENT OF COMMERCE

- |   |                   |  |
|---|-------------------|--|
| 1 | 1                 | Reliaster  |
| 1 |                   | Remains of small decapod crustacean                        |
| 4 |                   | <sup>cartilaginous</sup> remains of small fish.            |
| 1 |                   | young octopus in stomach                                   |
| 1 |                   | few vertebrae, ribs + stolith saved.                       |
| 1 |                   | with probably <i>Synodus luciocephalus</i> L. 83 mm.       |
| 1 |                   | with <i>Osmerus attenuatus</i> L. 125.                     |
| 1 |                   | with partially digested skate in stomach                   |
| 1 |                   | " skate in stomach   |
| 1 |                   | with 1 skate 9 in wide, 1 lake, 1 roe, 1 herring.          |
| 1 |                   | 1 lemon sole <i>Glyptocephalus zachvatini</i>              |
| 1 |                   | 1 lake in stomach  |
| 4 | (Aug 15)<br>(130) | ling cod, salmon, red cod.                                 |
| 1 | (Aug 18)          | one with partially digested salmon                         |
| 1 |                   | 9 sea anemones (pieces of <i>Fernichtia</i> included in 9) |
| 1 |                   | 1 flounder in stomach                                      |
| 1 |                   | do do do   |
| 1 |                   | 2 ft fish backbone in stomach, ling cod?                   |



DEPARTMENT OF COMMERCE

The largest bulb recorded 720  
from the Coast of Sweden.

DEPARTMENT OF COMMERCE

The halibut is the largest and most powerful of the flat fish and is said by the fishermen to drive all else before it.

Distribution

It is essentially a cold water fish and as a general rule the colder the water the better the quality of the fish taken therefrom.

Department of Commerce and Labor

Banks:

Chart. 5900

Seal Rk. S. E. S. E.

N. E. run till Prince Id. came in sight  
16 fms. depth. 15 miles offshore.

Fish:

Cape Terrello - Goat Id.

35-40 fms.

( $\frac{1}{2}$  ton fish per day av. wt. 50 lb. L. 120 lb.)

Redding Rk.

Ground Trinidad

Pt. Gordo, strong tide, 230 small halibut  
in 3 hrs.

Whales head, birds eggs.

Above bottoms rocky contrary to direction  
given on chart.

With Appendix



Tillamook June 22.

W. O. Chase & Son

Informed me there is not any fish caught out of Tillamook at present but there was a boat at one time with five men and they caught 17 fish that run in weight from 20 lb to 70 lb. but the boat was lost - having struck in the bar the engine went through the side and they did not try again. At the time of the accident the boat was 15 miles off shore. Salmon is caught here in which sixty boats are engaged in the business and they do very well for a while - He also said a boat can't get up the river and it cost too much to ship fish from here to do any business with halibut. a thousand will last a week and you can't do much shipping them to Port Land as they won't handle them for a small concern.

Salmon fishermen some of these  
make \$4,000 others not so much -  
There are two men in a boat and they  
have 120 fathom of net which is 15  
meshes deep  $9\frac{1}{2}$  in mesh they use a  
Columbia river boat 4 H. gas engine  
He (W. O. Chase) said a man named  
Hansen is trying to get up a cold  
storage plant a short distance from  
Tillamook. It is reported he has ~~two~~  
two fish boats coming from Seattle -  
They have a place down here or have  
an option on one they want to pay  
\$4000 and they had \$500 but can't  
make the other \$300. but the man  
said he would run it him self  
he is a fish-man (W. O. Chase) but don't  
think much of Hansen they surmise  
he is after a bunch of some farmer's change  
that is what the Tillamook people  
think but he may be all right. He  
has gone fishing for trout today



and we will not<sup>3</sup> see him. Mr. Hendon  
does not know any thing about Josh  
what ever, but he had a man with  
\$25,000 in San Francisco intended but  
he got cold feet, and dropped out, and  
is now after another that is the  
report even the less might be false-

Tillamook June 22<sup>nd</sup>  
Tillamook Clam market  
J. Bibby manager

Informed me he used 500 lbs halibut  
a week his fish is shipped from  
Portland, never heard of any fish  
being caught in Tillamook but  
has a good business in clams  
and crabs - He is about to close  
his business in Tillamook -

Yellowknife June 22 -

Mr H. Small owns and operates  
the Ice plant, which makes five tons  
a day but they use only about two tons.  
He runs the plant with a 15. H power  
gas engine. He also runs 16 boats  
which he sends fishing that close  
very well. He requires the men to  
fish there on net and they sell  
from the fish they fish eight months  
but they don't get many in winter -

Tillamook

1702



Mr. R. E. Velt -  
Portland Press Club -

Mr. Velt gave me those charts  
which we heard so much about.  
He was leaving Portland for New York.  
He also had me see the fish which  
the Decrahs got and they were very  
good fish averaging 15 lbs they are  
listed in Portland and they have had  
work to dispose of them having so  
much fish in Seattle. I note  
a very inferior fish for sale in Windsor  
Vine St for 25 cts. here they may be called  
Decrahs fish is quoted at 12 ct.

Capt Velt is part owner of the  
Decrahs boats known as  
Deep Water Boat

Decrahs had 22.00 lb for which  
they see.  $33\frac{3}{4}$  lb - crew shared 39 -



$$\begin{array}{r}
 2 \overline{) 77.00} \\
 \underline{38.50} \\
 2.50 \\
 \underline{2.95} \\
 43.95
 \end{array}$$

$$\begin{array}{r}
 57.54 \\
 \underline{413.90} \\
 13.59
 \end{array}$$

James Smart -

One of the crew of the Decatur told me there was some fish in shore now about six or eight miles off the light Yaquina Head - they got some clay - he said you could pick them up very quick - but he did not think there was enough fish there for a boat to do anything & few fish in summer but they could not find the bank out side of Hecla Bank -

Part II

## Ostrea

Mr Olsen the man that runs the fish market said he does not handle to any extent but what they get is shipped from Portland & the trip the December landed Heger brought them and they think he got stuck as there is very little halibut used here it is all salmon they don't know any thing about halibut. The run of salmon this year is small averaging 8 lbs to 10 lb or such sold to the cannery for six cents under 25 lb &  $7\frac{1}{2}$  ct over 25 lb. The cannery own most of the boats and they give 60 ct in the dollar and only fish tide work, but they do so right & day in the tide.



Colours



Overland June 24<sup>th</sup>

I met Capt Anderson about  
the Ella May she is getting for  
team-travel putting some heavy  
wrench gear for lifting the foot.  
Very expect to do well - as he  
has his own market and can  
handle a variety of fish - He  
sells a quantity of fish up in  
the logging camps intends to go  
to the South to operate the  
team-travel. If it proves to be  
a success or ill put his other  
foot in it. He expects to go to  
San Francisco with some of his  
fish. The two framed trips he  
fished north of Gray's harbor.  
He will be ready in about  
a week

A. Jensen

Bender went on the flats today  
(June 16<sup>th</sup>) she is going to load  
up the river, is a steam  
sawmill <sup>drawing</sup> 14 ft water. when loaded  
will take 500,000 ft lumber. The  
Commercial Club is buying the  
town and it is a fine little  
place but a boat cant get in  
or out in any kind of bad weather.  
at all. It is said she will not be  
allowed to sail without a licensed  
pilot - that is a hard thing to  
get as there is hardly any one  
acquainted with the river - but  
ever put in time with steam to  
get a license.



June 17<sup>th</sup>

Orate Capt. James Reeder -

Caught 25 fish average 20 lb  
a very uneven run some as  
small as 6 lbs which looks as  
though there were not many where  
these were caught. The small  
ones sold to the market for  
8 cts where they retailed for 25 cts

June 18<sup>th</sup>

Ora the Capt Reeder -

Caught 4 halibut average 15<sup>lb</sup>  
2 red cod - 2 lingcod It was  
blowing strong N.W. and  
strong tides 7 miles from the  
bar. I met Mr Wilson  
a fisherman he said fish were  
not very plenty except Crabs  
and Clams - Crabs sold for 80c  
a doz & Clams would be 75c. and  
Clams 15 a bucket -  
Lingcod were very plenty -



June 18<sup>th</sup>  
Capt Chambers boat Pilgrimage  
got 1 halibut 2 red cod 2 ling cod -  
7 miles off shore - strong current  
he had 2 window weights - about  
8 lb each, could not hold bottom  
Mr Sykes informed me he  
got 48 fish 25 miles off in  
200 ft of water.

New York

Capt Chambers

I have engaged the boat Pelgrim  
for \$10 a day. Capt Chamber is one  
of the old time fishermen and  
he has caught ten tons in one day  
with 12 men. Fish is not plenty  
now but later on they bunch up  
and you can catch a lot when they  
strut. He assured me there are  
not large banks that have been  
reported. But has seen good fishing  
in August they run about 50 lb.  
Then he me shot 15 miles S.W. + S-  
from the bar, and another one 16  
miles W. from the Bar.

There is not any boat going out  
of here today. The Pelgrim is ready.  
But it is blowing from the  
North West.



I met a <sup>equipped</sup> <sup>equipped</sup> Mr. Maden manager  
of the Cold Storage the building is  
60x30 Sharp freezer 10x14 Cold storage  
room 15x15 about 12 ft stud.  
running with gas engine Fairbank  
Morris 15 H power he has about  
decided in buying the Daisy for  
\$500 or he told me - you can  
buy stock. also said the Daisy  
held not down much deep water  
Bt did not understand fishing  
but if there was a good man in her  
he thought she may do well - he said  
a boat could get out & in about  
20 minutes without any trouble.  
and fish was inside in the summer  
in shallow water. and some time  
caught 70 in a day with hand-  
line -

Okey S. will be ready  
in about 10 days. Capt. Cannon takes  
out parties for which he charges  
are, a \$1 a day is considered a great  
fisherman but in my opinion  
he does not know the least thing  
about the business - but is close  
not much any difference as there  
is not fish enough to supply  
the local market.



Oregon  
with  
1913-14

Things that were written about in  
letters that were burned  
and many more experiences

①

Thurere Cobb has a tuby in  
high chair when they entertained  
me in Seattle. He was connected  
with Bur. Fisheries in Seattle, but I  
had gotten to know him before  
he was transferred west.

Then there was the musician  
at restaurants with musical  
entertainment accompaniment  
in Hotel Seattle. (x) Artistic  
of triangular building in  
basement; Prankin and I  
had two rooms in Hotel Fey  
one we made study and  
sitting room sleeping in  
the other.

Went to Portland to visit  
with Jack Compton (lock for tea)  
go went to an evening at Calif  
Alumni group where Mary  
Candace Harrier poetess lived  
she later died in poverty in N.Y.  
starved to death.

(2)

That was when I checked  
my brief case at Hotel ~~Portland~~  
and when I rushed off to get  
to the ship, they could not  
find my brief case at the  
ship (Albatross) had to delay  
sailing a whole day. The  
people had left it ~~behind~~  
behind a trunk (I guess is  
moving some other & it  
could not be found in the  
rush.)

Went to Univ to see Kincaid  
old host on table identified  
the room.

3 Van Osten the crabs? ~~Oyster~~ man.



Rosie <sup>was</sup> the buson waitress in  
lunch room where we lived  
in crude hotel in New Port  
Oregon.

Also William Schmitt had  
a ranch out of New Port  
but never got to see him  
because of ship sailing

Franklin friend ~~the~~ man and  
woman each married three  
times. Had <sup>but</sup> three or four children  
at each of ~~their~~ previous  
marriages, so when they  
all came visiting it was  
a crowd

We took son & last marriage  
and his sister out on a fishing  
trip on our chartered launch  
and for that after noon came  
in so thick we could not get  
back into the harbor. ~~So~~  
had to spend night out there

(4)

roasted in the middle of the  
deep. Calf made us  
fish chowder out of halibut  
cheeks first time old ever  
seen or eaten (had any).

I was anxious to see  
Alma and almost got  
a ride down on the Zilla May  
halibut boat going to S.F.  
but at last minute could  
not make it and she  
got wrecked in fog off  
N. Calif. Coast. If I had  
gone halibut survey would  
have gone to pot

Got  
old  
feet  
over time  
latter part  
of work  
& was up  
there to go

Travelled back in country  
one day to see fire devastated  
area just <sup>agrees</sup> burned stump  
here of former forest.



Department of Commerce and Labor

DRISCOLL'S REPORT.

Information obtained by him, regarding halibut-fishing off Ore. and Wash.

\*  
\* \* \* \* \*

June 17, 1914.

"Orobell", Capt. James Reeder, caught 25 fish averaging 20lbs; a very uneven run; some of the fish as small as 6 lbs., which looks as though there were not many where these were caught. The small ones sold to the market @ 8¢; retailed for 12½¢.

June 18, 1914.

"Orobell", Capt. Reeder, caught 4 halibut averaging 15 lbs., 2 red-fish, 2 "ling-cod (cultus-cod)", seven (7) miles from the bar; there was a strong N-W wind, with strong tides.

I met Mr. Wilson, a fisherman; he said that fish were not very plentiful; crabs were selling @ 80¢ the dozen, and would sell @ \$1.00 later; clams were quoted at 15¢ the basket. Ling-cod were very plentiful.

\* \* \*

The "Pilgrim", Capt. Chambers, got 1 halibut, 2 red-cod, 2 ling-cod, 8 miles off-shore --- strong current; Capt. Chambers said that he had two window-weights, about 8 lbs. each, but could not hold bottom.

\* \* \*

Mr. Sykes informed me, that he got 40 fish, 25 miles off-shore, in 200 fathoms of water.

\* \* \*

The following information was obtained from Capt. Chambers, an old-time fisherman: The "Pilgrim" is ready to go out today (June 18), but there is a hard blow from the N-W. The "Pilgrim" can be procured for \$10.00 per diem. Fish are not plentiful now, but later on they will



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bunch-up, and many can be caught when they strike; in August they average 50 lbs. There are no large banks, as has been reported; but there is one fishing-spot 15 miles SWxS from the bar, and another 16 miles W.

\* \* \*

Interview with Mr. Maiden, manager of the cold-storage plant: The building itself is about 30x30 feet; the sharp-freezing room is about 10x14 feet, with a capacity of perhaps 6000 lbs; the cold-storage room is 15x15x12 feet; a Fairbanks-Morse gas-engine of 15 H. P. has been installed.

Mr. Maiden contemplates buying the Daisy for \$5000.00; the boat has not done much in deep water, but he thought she might do well, with a good man in command.

Boats can get in and out of the harbor without any trouble, during six months of the year.

During the summer, the fish are inside, in the shoal-water, and as many as 70 in one day have been caught with hand-lines.

\* \* \*

The "Ollie S.", Captain Carner, will be ready in about ten days; Capt. Carner takes out parties, for which he charges at the rate of \$1.00 per diem for each person. He is considered a good fisherman, but in my opinion he does not know the least thing about the business; this makes no difference, however, as there are not fish enough to supply the local market.

\* \* \*

The "Bender" is a steam schooner, drawing 14 feet; capacity 500,000 feet of lumber.

Department of Commerce and Labor

Captain Voeth, of Portland, is part-owner of the "Decorah"; from him was obtained a blue-print of his charted soundings off Newport.

The "Decorah" had 2200 lbs. of fish, which sold for  $3\frac{3}{4}\phi$ ; these same fish were quoted @  $12\phi$  retail. The crew received a net share of \$39.00 each.

These are very good fish, averaging 15 lbs; I note a very inferior fish for sale here, 3 lbs. for  $25\phi$  --- they may be culls.

\* \* \*

James Bonset, a member of the crew of the "Decorah", told me, that there are now some fish in-shore, six or eight miles off Yaquina-Head light; they got 8000 one day, but he did not believe that there are enough fish there to enable a boat to make the work pay; no bank was found outside of Hecata Bank.

\* \* \*

TILLAMOOK, Wash., June 22, 1914.  
Mr. Chase, of W. O. Chase & Son, informed me, that there are no fish caught out of Tillamook at present; at one time there was a boat (5 men) which took 17 fish weighing from 20 to 70 pounds; the boat was lost, and no further attempt at halibut-fishing has been made. Boats cannot go up the river, and the cost of shipping fish to Portland is prohibitive.

Salmon are taken here, and sixty boats are engaged in the fishery; the common type is the "Columbia-river boat", with a 4 H. P. gas-engine; there are two men to each boat, with 120 fathoms of net, 18 meshes deep (meshes  $9\frac{1}{2}$ ").

A man named Henderson is trying to start a cold-storage plant, a short distance from Tillamook; it is surmized, by residents of Tillamook, that this is merely for speculative purposes; rumor has it, that



Department of Commerce and Labor

Henderson is bringing two boats down from Seattle.

\* \* \*

Mr. F. Small owns and operates the ice-plant, which makes something like five tons a day; the plant is run by a gas-engine of 15 H. P.

Mr. Small owns sixteen boats that do very well; these fish throughout eight months of the year, but do not get much in winter. The men are required to furnish their own nets; they sell their catch to Small.

\* \* \*

Mr. I. Bibby, manager of the Tillamook Clam Market, informed me, that he uses 500 lbs. of fish each week; his fish are shipped from Portland, and he has never heard of any halibut being caught in Tillamook. He has a good business in clams and crabs, although he is about to close out.

-----  
Aberdeen, Wash.

June 24.

The "Zilla May", Capt. ~~E~~nderson, is fitting for a beam-trawl, and putting in some heavy winch gear for lifting the net; she will be ready in about a week. The last two trips were north of Gray's Harbor.

Capt. Anderson expects to do well, as he has his own market, and can handle a variety of fish -- he sells a quantity in the logging-camps; later, he expects to go to San Francisco with some of his fish. He intends to go to the southward to operate the beam-trawl; if it proves a success, he will engage his other boat in it.

Department of Commerce and Labor

Astoria, Washington.

Mr. Colston, the man who keeps the fish-market, says he does not handle halibut to any extent; what he gets is shipped from Portland. The catch landed by the "Decorah" was bought by Hegan, who is said to have lost on the deal, since there is little demand for them here. The fishermen know very little concerning halibut --- the principal fish is salmon.

The run of salmon this year was small, averaging eight tons to the boat; the price paid at the cannery is six cents for fish under 25 lbs., seven and one-half cents for those over that weight.

The cannery owns most of the boats, which fish only during the tide and at that time work day and night. The men receive 60% of the catch, but they are required to sell to the cannery.



			Fish sold	Price rec'd	Value rec'd	Culls (mushy fish)
May 10	Decorah	Portland	4500	3	135.00	unknown
28	"	"	13,700	4	548.00	"
June 16	Decorah	Portland	22,800	3	684.00	unknown
* July 4	Washington	Seattle	29,000	3	870.00	20,000
6	Decorah	Portland	32,500	3 1/4	1056.25	unknown
11	Daisy	Newport	19,000	3 1/4	617.50	"
16	"	Seattle	30,000	5 1/2	1650.00	5000
22	Decorah	Portland	21,000	4	840.00	unknown
30	Daisy	Newport	17,000	5 1/2	935.00	"
Aug. 1	Seattle	Seattle	44,000	3	1320.00	30,000
4	Alaska	"	38,600	3	1158.00	20,000
# 10	Decorah	Portland	14,000	3 1/4	455.00	unknown
12	Daisy	Seattle	27,800	4 3/4	1320.50	12,000
20	Tordenskjold	"	55,000	3 1/4	1787.50	15,000
21	America	"	32,000	3 1/4	1040.00	25,000
22	Decorah	"	30,000	3	900.00	unknown
24	Alaska	"	56,800	3 3/4	2130.00	25,000
25	Daisy	"	27,000	4	1080.00	8,000
			60,000		2100.00	50,000
Sept. 1	San Juan	Seattle	74,000	3 1/2	2590.00	27,000
5	Athena	"	54,000	3 1/2	1890.00	27,000
7	Senator	"	28,000	3 1/4	910.00	15,000
8	Magnolia	"	30,000	3 1/4	975.00	10,000
11	Panama	"	46,000	3	1380.00	22,000
15	Omaney	"	40,000	4 1/4	1700.00	10,000
-	Daisy	San Francisco	13,000	10	1300.00	29,000
			799,700 lbs.	\$	29,271.75	300,000 lbs.
			785,700 lbs.	\$	28,781.75	323,000 lbs.

#### Fish Taken Newport Banks:

May 10 - July 30:	174,500 lbs (203,500 lbs)	= \$6,920.75 (\$7790.75)
Aug. 1 - Sept. 15:	625,200 lbs (596,200 lbs)	= 22,351.00 (21,481.00)
(exclusive of Aug 10th trip)	611,200	582,200
Totals	799,700 lbs	= 29,271.75

Total fish taken: 1,099,700 lbs + (33,000? [estimated unknown]) = 1,132,700

(including mushy)  
 Figures not in parentheses are those in which "Washington" Trip has been considered an Aug. one. { Does not affect grand totals.



If trips of Daisy after Aug 1st be considered apart from <sup>information given out as a result of the</sup> Bureau's investigation, above figures would be:

Fish taken	Value
May 10 - July 30: 242,300 lbs (271,300) = \$ 10,621.25 (\$11,490.25)	
Aug 1 - Sept 15: 557,400 lbs (528,400) = \$ 18,650.50 (\$17,780.50)	
Totals <u>799,700 lbs.</u>	<u>\$ 29,271.75</u>
785,700 lbs	28,781.75

\* This trip of the Washington must have been made in Aug. no Seattle boats had been reported off banks prior to Carrolls leaving, date very probably Aug 4. (have written for verification of this).

# Aug. 10 trip of Decórah is included in totals of fish taken prior to Carrolls leaving. He did not take her over until the next trip. Was made and would have been irrespective of Bureau's investigation.

Note: In Aug. two other trips were given by Cobb, viz:

Star } but names were followed by statement "no fish."  
La Paloma }

{ From list of halibut vessel arrivals, (Pac. Fish)

Star	July = 21	190,000 lbs	La Paloma	July 22 = 28,000 lbs
"	Aug = 14	190,000 "	"	Aug 7 = 40,000 "
"	Sept = 13	225,000 "	"	Aug 24 = 45,000 "
			"	Sept 12 = 20,000 "

Monthly Totals

July	119,500 lbs (148,500 lbs) = \$ 5,098.75 (\$ 5,968.75) = 5 trips (6 trips)
Aug.	354,200 lbs (325,200 lbs) = \$ 12,061.00 (\$ 11,061.00) = 10 trips (9 trips)
Sept.	285,000 lbs (271,000 lbs) = \$ 10,745.00 (\$ 10,255.00) = 7 trips
May	18,200 lbs = \$ 683.00 = 2 trips
June	22,800 lbs = \$ 684.00 = 1 trip
Total	<u>799,700 lbs</u> = <u>\$ 29,271.75</u>

				sold		Value rec'd	Culls {	musky fish
May 10	Decorah	Portland		4,500	3	135.00	unknown	
" 28	"	"		13,700	4	548.00	"	1.000
June 16	"	"		22,800	3	684.00	"	
* July 4	* Washington	* Seattle?	*	29,000?	3?	870.00?	20,000?	
" 6	Decorah	Portland		32,500	3 1/4	1056.25	unknown	2.000?
" 11	Daisy	Newport		19,000	3 1/4	617.50	"	2.000?
" 16	"	Seattle		30,000	5 1/2	1650.00	5,000	
July 22	Decorah	Portland		21,000	4	840.00	unknown	2.000?
" 30	Daisy	Newport		17,000	5 1/2	935.00	"	2.000
Aug. 1	Seattle	Seattle		44,000	3	1320.00	30,000	
" 4	Alaska	"		38,600	3	1158.00	20,000	
Aug. 10	Decorah	Portland		14,000	3 1/4	455.00	unknown	4.000?
" 12	Daisy	Seattle		27,800	4 3/4	1320.50	12,000	
" 20	Tordenskjold	"		55,000	3 1/4	1787.50	15,000	
" 21	America	"		32,000	3 1/4	1040.00	25,000	
" 22	Decorah	"		30,000	3	900.00	unknown	10.000?
" 24	Alaska	"		56,800	3 3/4	2130.00	25,000	
" 25	Daisy	"		27,000	4	1080.00	8,000	
Sept 1	San Juan	Seattle		74,000?	3 1/2	2590.00	<del>unknown</del>	<del>leave</del>
" 5	Athena	"		54,000	3 1/2	1890.00	27,000	
" 7	Senator	"		28,000	3 1/4	910.00	15,000	
" 8	Magnolia	"		30,000	3 1/4	975.00	10,000	
" 11	Panama	"		46,000	3	1380.00	22,000	
" 15	Omaney	"		40,000	4 1/4	1700.00	10,000	
" —	Daisy	San Francisco		13,000	10	1300.00	29,000	
				<u>799,700 lbs.</u>		<u>\$29,271.45</u>	<u>300,000 lbs.</u>	<u>(33,000 more?)</u>

Fish Taken Newport Banks: Value:

May 10 - July 30: 174,500 lbs (203,500 lbs) = \$6,920.75 (\$7,790.75)  
 (including Aug 10, Decorah, prior to Carroll's time leaving)

Aug. 1 - Sept. 15: 625,200 lbs (596,200 lbs) = \$22,351.00 (\$21,481.00)

Totals. 799,700 lbs. \$29,271

Total Fish Taken good + mushy 1,099,700 + (33,000?) = 1,132,700 (over)



In Aug two trips were given by Cobb viz:

Star  
La Paloma

but followed by statement "no fish."

See accompanying Sheet.  
for revision of Totals  
because of daisy  
trips

Taken from list of  
halibut vessel arrivals  
(Pac. Fish.)

Star in July 21-23 = 190,000  
" - Aug 14-18 = 190,000  
" - Sept. 13-15 = 225,000

La Paloma July 22 = 28,000  
Aug. 7 = 40,000  
" 24 = 45,000  
" Sept. 12 = 20,000

\* This Trip of The Washington must have been made in Aug. no Seattle boats had been reported off banks prior to Carroll's leaving, date very probably Aug. 4.

of Decorah

Note: Aug 10 trip is included in totals of fish taken prior to Carroll's leaving as it was made without information given out by Bureau being used. (Have written for verification of this)

Monthly Totals:

July 119,500 lbs (148,500) = \$ 5,098.75 (5,968.75) = 5 trips (6); 23,900

Aug. 354,200 (325,200) = \$ 12,061.00 (11,061.00) = 10 trips (9); 35,420

Sept. 285,000 10,745.00 = 7 trips ; 40,714

May 18,200 683.00 = 2 trips

June 22,800 684.00 = 1 trip.

Total 799,700 lbs \$ 29,271.75 = 25 trips;

~~May 18,200~~  
~~June 22,800~~  
July 5,000  
Aug 155,000  
Sept. 140,000

Av. Trips inclusive of mushy

July 24,900

Aug 50,920

Sept. 60,714

Av. Trip 1913 (Pac. Fish) = 35,369 lbs.  
schooners only.

# Average Trips, schooners only,

	Newport (1914) (Good fish)	(Good + mushy)	Total Seattle receipts (1914)	(1913)
July	23,900	24,900	45,883	43,052
Aug	35,420	50,920	45,701	42,729
Sept.	<del>40,714</del> 36,714	<del>60,714</del> 60,714	<del>38,343</del> 38,343	<del>38,657</del> 38,657
	86,034			
	100,034	136,534	169,927	164,438

Seattle figures give Total Trips<sup>\*</sup> inclusive of mushy fish; for this reason column of "good + mushy" is given under Newport returns. Only July, Aug, and Sept are given as in May and June but few desultory trips were made. The Sept. figures are up until Sept 15. as fishermen will no longer report on Newport fish as buyers are on lookout for them. This also will keep Sept records from being as complete as they otherwise would have been.

As records stand above the Newport Totals compare very favorably with average trips returned to Seattle during 1913 and 1914 in September alone even only for good fish running far ahead.

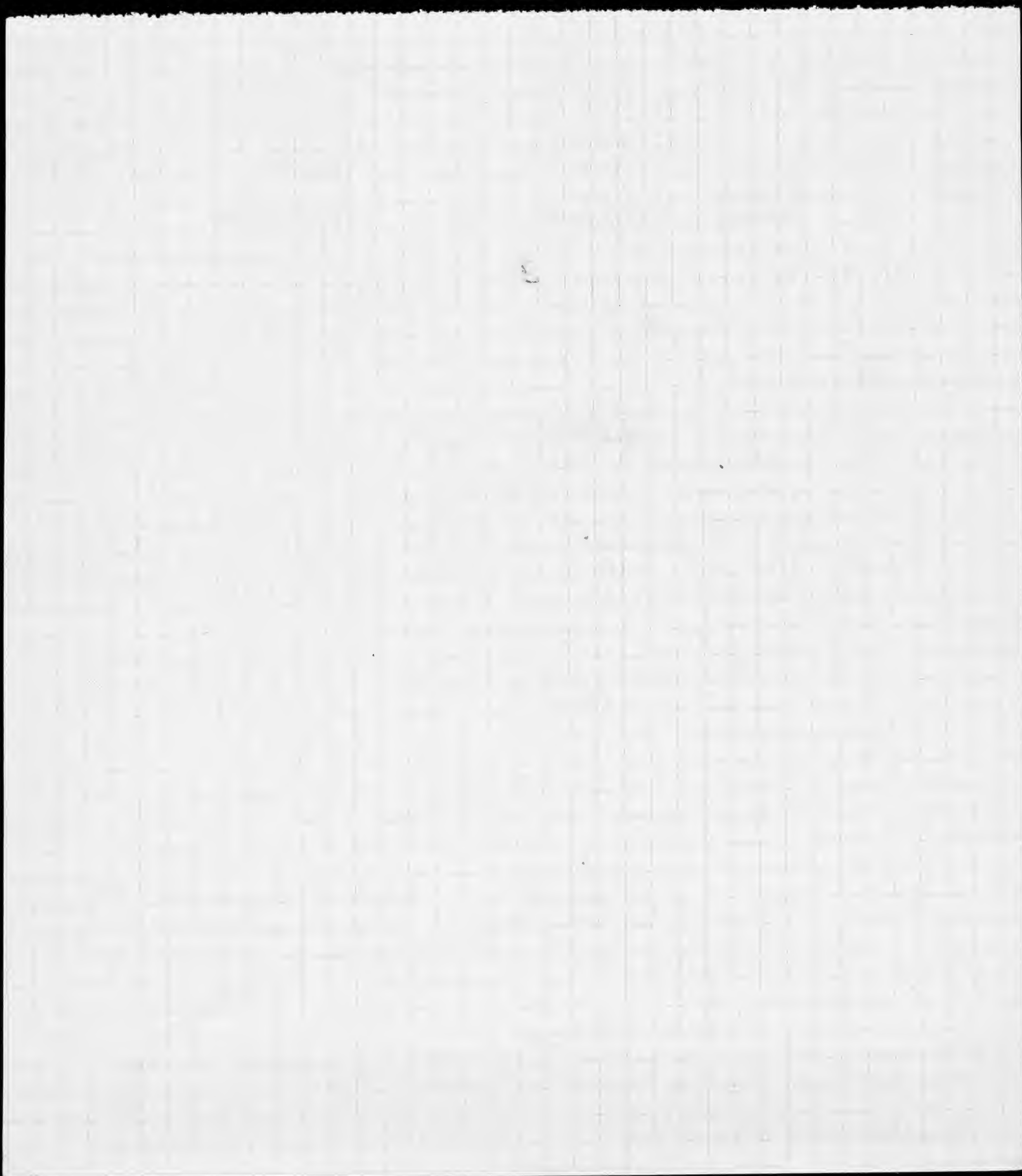
Aug. 25	Daisy	35,000
Sept. 5	Athena	75,000
Sept. 8	Senator	45,000

etc.

* i.e.:	Aug 1. Seattle	65,000	Aug. 21	America	50,000
	Aug 3 Alaska	60,000	Aug 22	Decorah	60,000
	Aug 12 Daisy	40,000	Aug 24	Alaska	80,000

Figs taken  
from Pac. Fish.  
for Oct. 14





Pac. Fish.  
L = Reid.  
X = Cobb  
O = Driscoll Culls.

May	10	Pd.	Decorah	4500	3 <sup>4</sup>	Duplication	735.00	
	28	Pd.	"	13700	4 <sup>4</sup>		548.00	
June	16	Pd.	"	22800	3 <sup>4</sup>		684.00	
July or June	18		Daisy	39000	3 <sup>4</sup>		1170.00	5,000
July	4		Washington	29000	3 <sup>4</sup>		870.00	20,000
	6	L Pd.	<del>Alaska</del>	<del>39000</del>	<del>3<sup>4</sup></del>		<del>1170.00</del>	
	11	Nr.	Decorah	32500	3 <sup>1</sup> / <sub>4</sub>		983.00	
	16	Se	Daisy	19000	3 <sup>1</sup> / <sub>4</sub>	Duplication	474.00	
	22		"	20000	5 <sup>1</sup> / <sub>2</sub>		515.00	5,000
	22	Pd.	Decorah	21000	4		1240.00	Note corr.
Aug	30	Nr.	Daisy	17000	5 <sup>1</sup> / <sub>2</sub>		858.50	
	10	Pd.	Decorah	14000	3 <sup>1</sup> / <sub>4</sub>		423.00	
	12	xoi	Daisy	27800	4 <sup>3</sup> / <sub>4</sub>		1132.00	12,000
Aug	4	xoi	Alaska	38000	3 <sup>4</sup>		1170.00	20,000
	1	xoi	Seattle	44000	3 <sup>4</sup>		1320.00	30,000
	20	xoi	Tordensgold	70000	3 <sup>1</sup> / <sub>4</sub>		2117.50	15,000
	21	xoi	America	32000	3 <sup>1</sup> / <sub>4</sub>		968.00	25,000
	22	xoi	Decorah	30000	3		900.00	Unknown
	24	xoi	Alaska	56800	3 <sup>3</sup> / <sub>4</sub>		1746.00	25,000
	25	Si	Daisy	35000	4		1400.00	See Dris
Sept	1	xoi	San Juan	74000	3 <sup>1</sup> / <sub>2</sub>		2257.00	Not Known
	5	xoi	Athena	54000	3 <sup>1</sup> / <sub>2</sub>		1647.00	27,000
	7	xoi	Senator	28000	3 <sup>1</sup> / <sub>4</sub>		874.00	15,000
	8	xoi	Magnolia	30000	3 <sup>1</sup> / <sub>4</sub>		928.00	10,000
	11	xoi	Panama	46000	3		1380.00	22,000
	15	Si.F.	Omaney	40000	4 <sup>1</sup> / <sub>4</sub>		1610.00	10,000
Sept	—		Daisy	13000	10		1300.00	29,000

Total 911,400 lbs.

Figures I gave Dr Moore

\$ 30,782.00

\$ 8,104.00 (prior to July 22)

Daisy June 16 40,000

" July 16 39,000

22,678.00 (July 22 - Sept. 15)

Daisy sold June 23.

Carroll left July 28

If Trips of Hairy after Aug 1st be considered after  
information gets out as a result  
from Bureau's investigation the above figures would be

### Fish Taken

May 10 - July 30; 242,300 lbs (271,300) = \$ 10,621.25 (11,490.25)

Aug 1 - Sept. 15; 557,400 lbs (528,400) = \$ 18,650.50 (17,780.50)

Totals. ; 779,700 lbs = \$ 29,271.75

4580  
137.5  
1650  
1787.5



# VI

## HYDROGRAPHIC TABLES.

The hydrographic records of the present cruise have been included in this report as Table V and Chart II. Ordinarily these data are published separately, but are appended here so that reference may be readily had to the various soundings made in the determination of the bottom.

Only the H series of numbers has been employed in designating stations. The various "sets" and trials for the sake of convenience and to avoid confusion have been referred to the number <sup>of the</sup> hydrographic operation conducted at the same time. The last previous number in this series was H. 5365, made in connection with the Biological Survey of San Francisco Bay.

The position of each station has been given by means of "bearings" and distances to the nearest prominent landmark. All bearings are "true".

The "charts" are those published by the Coast and Geodetic Survey.

The "time of day" is that taken at the beginning of the sounding operation at which the "depth" was determined.

For the "character of bottom" the abbreviations used are as follows:

blk ... black,	G ... gravel,	hrd ... hard,
brk ... broken,	gn ... green,	M .... mud,
crs.... coarse	gran .. granular,	rky ... rocky,
fine ... fine,	gy ... gray,	S ..... sand,
For ... foraminifera,		Sh .... shells,

Shale, a new characterization is used to designate a <sup>at times calcareous,</sup> siliceous, hard pan composed largely of sponge spicules and



diatom tests with at times an admixture of a certain percentage of lime. It occurs at times as a pseudo-gravel, granular (gran); in the form of honeycombed boulders or easily crumbled rocks, rocky (rky.); and as a species of hard mud (hrd. M.).

The "air temperature" is copied from the ship's log. The accuracy of this reading is not to be relied upon to any great extent owing to the unfortunate placing of the thermometer casing near the stack.

The "surface" and "bottom" temperatures represent the corrected readings of tested Negretti-Zambra thermometers used in appropriate trip cases.

"Salinity" determinations were made by titration with the standard outfit supplied by the International Council for the Exploration of the Sea.

The "apparatus" used, where abbreviated, is in accordance with the following scheme:

Alb. samp. .... Albatross bottom sampler.  
Ek. bot. .... Ekman water sample bottle.  
O.P. drdg. .... Orange-peel bucket dredge.  
P.N. bot. .... Pettersen-Nansen insulated water bottle.  
Tan. Blishedr. .. Tanner-Blish sounding machine.

The "depth" of the trial is that at which the gear was used or operated and under the "drift" the direction and distance through which the dredge was hauled is given. <sup>These</sup> ~~and~~ are approximations. The "duration" is the length of time <sup>consumed in</sup> ~~of~~ towing the apparatus or allotted to a "cast".

The chart (No. II.) of hydrographic stations has been taken from the Coast and Geodetic Survey charts Nos. 5,900, 6,000 and 6,100. The soundings are numbered in correspondence with Table V. in the order of their taking.

It will be noticed when chart I. is superimposed that the soundings of the same general character of bottom fall within the proper colored areas.

*Pecten caurinus* Gould.

Wrangell Alaska - Suislaw River Oregon

Sta 3081 61 fms N 46° Suislaw River, Ore.

" 3858

Port Townsend, Wash.

" 3866

" " "

*Snidria foliolata* Zube

6 Sta. 2870 58 f.

6,8 2882 68 f.

2 3 29 "

1 4 " "

1 3046 48 "

1, 11, 1, 7 50 "

8, 9 52 "

2 9 43 "

1 3051 60 "

2 3 64 "

3 5 28 f

1 8 " "

5 9 77 "

1 3060 28 "

2 1 23 "

1 2 44 "

2 3 42 "

17 4 46 "

4 3081 61 "

3 32 "

2 4 46

Off Grays Harbor.

" Columbia River, Oregon. <sup>Sept. 22-88</sup> Oct. 13 "

" Tillamook Rk. " 18 "

" " " " " "

" Grays Harbor, June 7-89

" " " " " "

" " " " " "

" Shoulwater Bay " " "

" Aceta Banks, Oregon " 8 "

" " " " " "

Off Yaquina Head " 9 "

" Cape Conception " " "

" Silet Bay, Oregon " " "

" Tillamook Rk. ? Jan 13 "

" " " ? " " "

" " " June 13 "

" " " " " "

" " " " " "

" Suislaw River Oregon Sept. 1 "

" " " 2 "

" ~~Off~~ Aceta Head Oregon " "



3081 Sept. 1. 45.8 61 fms  
43° 59' N. 124° 20' W. gn. m. s. L.B.T.

This station has been marked on the  
chart of "bottoms" with a cross ~~#~~ X



DEPARTMENT OF COMMERCE

- Salpa sp. H. 5681
- ✓ Pennatula <sup>aculeata Dan.</sup> ~~aciles~~ Danielson, H 5714
- ✓ Pisaster papulosus Ver. H. 5714
- ✓ Luidia foliata Grube (10)  
Yagr. Head. Ore June 9-1889
- ✓ Orthasterias dawsoni Ver. H 5681  
(Br)
- ✓ Pycnopodia helianthoides H 5714
- ✓ Metridium marginatum H 5714 (Les)
- ✓ Cribrina elegantissima (Brandt) July 21, Newport Oregon
- Cribrina sp. H. 5732
- Cribrina sp. H. 5735

ESTIMATE FOR HALIBUT SURVEY: APRIL 1 - JUNE 30, 1914.  
91 DAYS.

1.	Pilot (H.B. Joyce), @ \$5.00 per day	\$ 395.00
2.	Mess dues of pilot, @ \$1.50 per day	113.00
3.	Practical fishermen, 4 men @ \$2.00 per day	864.00
4.	Navy ration for fishermen, @ 30¢ per day per man	150.00
5.	Bait, (salt herring, 20 bls. were used on 1911 (cruise, 3 months), 20 bls. @ \$4.50	90.00
6.	Cots, 4 for fishermen, @ \$2.50	10.00
7.	Overhauling and renewing present halibut gear; (buoys, lines, hooks, anchors, thole pins, (dory scoops, etc.)	25.00
8.	Installation of a power gurdy, (dependent upon (installation of at least one of the inde- (pendent hoisting units in estimate sub- (mitted October 29, 1913)	100.00
9.	Additional gear, provisional estimate, 10 skates, second-hand gear, @ \$7.00 (Should it be found advantageous to cover (more ground than present equipment would (allow, i.e., fishing from ship).	70.00
10.	Unclassified: 3 months provisionally estimated @ \$100.00 per month (a, Possible detail for statistical work ( of member of staff at Yaquina or Till- ( amook. (b. Possible need of laboratory ashore for ( titrating water samples. (c. Miscellaneous bills and expenses).	300.00

ESTIMATE FOR HALIBUT SURVEY: APRIL 1 - JUNE 30, 1914.  
91 DAYS.

---

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9. Additional gear, provisional estimate, 10 skates, second-hand gear, @ \$7.00 (Should it be found advantageous to cover (more ground than present equipment would (allow, i.e., fishing from ship).	70.00
10. Unclassified: 3 months provisionally estimated @ \$100.00 per month (a, Possible detail for statistical work ( of member of staff at Yaquina or Till- ( amook. (b. Possible need of laboratory ashore for ( titrating water samples. (c. Miscellaneous bills and expenses).	300.00



# Table of "Sets" (Halibut Fishing Trials) Fish Taken (catch)

Set No.	Position	Reference Station	Date 1914	Depth fathoms	Character Bottom	Number of Skates	Duration of Set	Bait	Number Halibut taken	Total Weight	Range Size	Average (between 10-80 lbs.)	Number first class fish	Average weight of first class fish	Sharks	Skates	Red Rat-fish	Rock salmon	Red rock salmon	Red rock cod	Black Cod	Cod	Hake	Sole
<u>First Albatross Trip.</u>																								
I	Heceta Bank (Heceta bears N. 78½° E. (true) distant light 31.5 miles)	537788	April 29	88-92	shale, rhy, gran; blk. S.; G.	2	1	salt herring	9	296	10-72	30.8	8	37.2	21	1			34		1			
					On trawl: { 1 rock honeycomb, 1 starfish, 1 Heliaster } (put in remarks column)																			
II	Off Newport (Yaquina Head Light bears S. 80½° E. (true) distant 19.8 miles)	5403	May 2	96	gn. M.; fine blk. S.	2	1	salt herring	1	21					1	4		8		3				
					On trawl: { 2 in core, shale, blk. S. } (put in remarks column)																			
III	Heceta Bank (Heceta Light bears S. 74° E. (true) distant 29.2 miles)	544788	May 5	61	shale, gran; fine G.	4	1	salt herring	4	88	10-38	22.0	3	26.0	80	3		3		1				
					On trawl: { 1 starfish, 3-4 crinoids } (put in remarks column)																			
IV	Off Newport (Yaquina Head Light bears N. 71° E. (true) distant 13.7 miles)	548687	May 6	54-57	fine blk. S.; brk. S.; crs. gy. S.	2	1	salt herring	8	157	7-33	19.6	7	21.4	36	2		9		1				
					On trawl: { 1 basket star } (put in remarks column)																			
V	do (Yaquina Head Light bears N. 81° E. (true) distant 14.4 miles)	5492	May 6	62	shale, gran; fine G.	2	1	salt herring	4	67	10-23	14.2	3	15.7										
					On trawl: { 3 red rock cod, 1 ling cod, 1 rock salmon taken on hand line } (put in remarks column)																			
VI	Off Cascade Head (Cape Hiwanda bears N. 29° E. (true) distant 12.7 miles)	5518	May 7	48	fine gy. S.	2	1	salt herring																
					On trawl: { 1 anemone, dead scallop shells, 1 Heliaster } (put in remarks column)																			
VII	Off Columbia River (Tillamook Light bears N. 87° E. (true) distant 25.1 miles)	5558	May 8	79	shale, gran.	2	1	salt herring	1	32					15	1		4						
					On trawl: { 1 starfish, 1 scallop shell } (put in remarks column)																			
<u>Second Albatross Trip</u>																								
8	Off Newport (Yaquina Light bears N. 26° E. (true) distant 10.8 miles)	556889	May 27	31-34	fine gy. S.	2	1	salt herring	3	69	15-28	23.0	3	23.0			5							
					On trawl: { 6 pennatulids, 2 starfishes } (put in remarks column)																			
9	Heceta Bank (Heceta Light bears N. 65½° E. (true) distant 27.8 miles)	5589890	May 28	66-68	shale, gran.	2	1	salt herring	5	108	9-40	21.6	4	24.7	1									
					On trawl: { 1 rock, 1 dia. fine pos. stone } (put in remarks column)																			
X	do (Heceta Light bears N. 63° E. (true) distant 30.0 miles)	5594	May 28	109	fine blk. S.; fine G.	2	1	salt herring	1	16					1	1					26*			
					On trawl: { 1 rock, 1 dia. fine pos. stone } (put in remarks column)																			
XI	do (Heceta Light bears N. 77½° E. (true) distant 31.6 miles)	5619	May 29	100	fine blk. S.	2	1	salt herring	1	42					1						5*			
					On trawl: { 1 rock, 1 dia. fine pos. stone } (put in remarks column)																			
<u>Operation conducted out of Newport</u>																								
XII	Off Newport (approximately as indicated on chart)	①	July 13	30	crs. S.			surf-perch salt herring	1	10														
					On trawl: { 9 pennatulids } (put in remarks column)																			
XIII	do	②	July 14	30	crs. S.	1 line *		clam* salt herring	2															
					On trawl: { 10 pennatulids, 2 anemones } (put in remarks column)																			

Some remarks column larger  
Hake & rattfish columns  
could be eliminated and  
information put therein.

## Addenda Remarks

Double-banked set.  
Double-banked set.  
Cultus cod weighed 21 lbs., 42 in. long.  
Average size of red-rock fish weighed 11 lbs.  
Cultus cod weighed 20 lbs., 39 in. long.  
Double-banked set.  
Red-rock fish, 1 small one: 7 lbs., 32 in. long, stomach contents saved.  
Cultus cod: 1, 16 lbs., 37 in. long, 2, 22 " 39 1/2 " " Sole: 41 lbs 8 in. " "  
Double-banked set.  
Sole: 1, 14 lbs., 36 in. long, 2, 12 lbs., 32 in. long, stomach contents saved.  
Cultus cod: 14 lbs., 36 in. long, stomach contents saved.  
Skates: 1 29 lbs., 50 in. long, 1 36 " 54 " "  
Double-banked set.  
Octopus: 1 20 lbs., 45 in. long, 2 15 " 42 " "  
Skate: 27 in. long, 30 in. wide  
Cultus cod: 11 lbs., 33 in. long.  
Double-banked set.  
Black-cod averaged 10.6 lbs., range 7-18 lbs., 28 very small.  
18 lb = 35 in. long.  
12 lb = 32 " "  
10 lb = 31 " "  
7 lb = 26 and 22 in. long.  
Double-banked set.  
Black-cod averaged 12 lbs., range 5-16 lbs.  
16 lb, 33 and 36 in. long.  
15 " 36 in. long. Shark app.  
8 " 28 " " 48 in. long  
5 " 22 " sole  
Halibut and 1 Hake taken on hand lines  
\* flounder gear  
2 halibut and 1 rock salmon taken on hand lines  
no weights taken.



# Table of Sets (Halibut)

number used  
Av. of in. of other  
caught fish were  
weighed.

Set	Ref. Sta.	Date	Depth	Bottom	No. Skates	Duration	Bait	No. fish.	Total Weight	Range	Average	No. first class	Average first class	Dog fish	Sharks	Skates	Ratfish	Rock-Salmon	Red-rock cod	Black Cod	ling cod	Hake	Sole	Remarks.
XIV 14 Off Newport (approximately as indicated on chart)	(3a)	July 20	25	crs. gy. S. 9 pennatulids	1 (do)	5	salt herring	6	720	6-45	20.0	27	24.0			12								1 halibut
XV 15 do	(3b)	July 20	38	crs. gy. S. 1 pennatulid 1 anemones 4 starfish 1 Heliaster	28 (do)	3	surf perch salt herring	5 (do)	30					7		3		4						* flounder gear 1 live (6 in) scallop on hand line 4 red-rock fish and 3 soles taken on hand lines 1 dogfish 2 in. long
XVI 16 do	(4)	July 21	45	crs. gy. S. 1 pennatulid 5 starfish 1 Heliaster 1 anemones	38 (do)	2	surf perch salt herring	45	1867	10-125	41.5	38	40.4	4		32		4		4		5		* flounder gear 2 other tows 15 and 30 mins respectively unsuccessful.
XVII 17 do	(5)	July 24	38-44	crs. gy. S. 6 pennatulids 2 Heliaster	2 (do)	3	salmon	29	687	5-65	23.7	15	36.9			8		2				2	3	(bin) 1 live scallop taken with oyster dredge, 15 min. tow 2 halibut and 2 red-rock fish taken on hand lines.
XVIII 18 do	(6)	July 25	47	crs. gy. S. 2 Heliaster	2 (do)	2	frozen herring	5	265	10-11.5	48.0	3	38.3	3		3		1						5 dogfish, 2 skates and 1 red-rock fish taken on hand lines. 1 skate 8 in wide 1 octopus arms, 54 in. long
XIX 19 do	(7)	July 27	35-40 4 rocks	Shale, rky, crs. S. inc. G. foraminifera 1 Heliaster	2 (do)	2	octopus salt herring	136 35	817	4-70	22.7	24	31.2	13	1									1 halibut taken on hand lines
XX 20 do	(8)	July 28	33-35	crs. gy. S. 4 Heliaster	1 (do)	2	salmon salt herring	18	397	6-60	22.0	13	27.1	4		2						2	1	
XXI 21 do	(9)	Aug 4	30	crs. gy. S. 30 pennatulids 2 Heliaster	1 (do)	1	surf perch salmon salt herring	5	132	7-55	26.4	3	38.3			11								
XXII 22 do	(10)	Aug 6	35	crs. gy. S. 6 Heliaster 1 anemones	2 (do)	4	surf perch salt herring	18	327	7-40	18.2	12	22.4			8	1							2 live (3 and 7 in.) scallops taken with oyster dredge, 20 min tow 2 other tows 4 and 45 min. ea. both unsuccessful.
XXIII 23 do	(11)	Aug 14	40	crs. gy. S. 3 pennatulids	1 (do)	2	frozen herring	38	813	5-75	21.4	23	30.4	1		15		2				1		40 min. tow with oyster dredge, unsuccessful.
XXIV 24 do	(12)	Aug 15	35	Shale rky; crs. gy. S. 2 radiolaria full of life	1 (do)	3	salmon	27	559	6-55	20.7	15	29.0				2	15						
XXV 25 do	(13)	Aug 16	37	crs. gy. S. 1 Heliaster	1 (do)	2	salmon	89	355	15-70	39.4	9	39.4	28	1	1		1					2	1 halibut
XXVI 26 do	(14)	Aug 17	35	Shale, rky. 2 anemones	1 (do)	2	salmon	129 28	934	6-75	32.2	22	40.1	2	4			13						1 dogfish, 1 slip shark and 1 red-rock fish taken on hand lines 1 skate, 54 in. wide.

Set	Ref. Sta.	Date	Depth	Bottom	No Skates	Duration	Bait	No fish	Total Weight	Range	Average	No first class	Average first class	Dog fish	Sharks	Skates	Flat fish	Rock salmon	Red rock cod	Black cod	Ling Cod	Cutthroat	Hake	Sole	Remarks	
Third Albatross Trip.																										
XXVII 27 Off Coos Bay (Umpqua River Light bears N. 28 1/2° E. (true) distant 8.2 miles)	5624	Aug 29	36	fne. gy. S. 1 star fish. (do)	2	2	salmon	2	32	12-20	16	2	16			3	1								3	Double-bunked set Soles: 18, 19 and 22 in. long.
XXVIII 28 do (Cape Arago Light bears N. 72° (true) distant 9.0 miles)	5632	Aug 30	65	shale, gran.	2	2	salmon	13	375	11-85	28.8	12	24.2	4	2						2				3	Double-bunked set 1 shark was soup fin Blue shark: 56 in. long.
XXIX 29 do (Cape Arago Light bears S. 20 1/2° E. (true) distant 2.7 miles)	5633	Aug 30	30	fne. gy. S.	2	2	salmon	3	109	9-90	36.3	0	0	2	15										3	Double-bunked set
XXX 30 do (Cape Arago Light bears S. 2 1/2° E. (true) distant 5.5 miles)	5650	Aug 31	47	fne. gy. S.	2	2	salmon							1	7									1	Double-bunked set 1 shark was "soup fin"	
XXXI 31 Off Heceta Head (Heceta Light bears N. 28 1/2° E. (true) distant 10.8 miles)	5663	Aug 31	42	fne. gy. S.	2	2	salmon								6				3				2	2	Double-bunked set	
XXXII 32 Heceta Bank. (Heceta Light bears N. 79° E. (true) distant 31.4 miles)	5681	Sept 1	82	shale, gran; fne. blk. S.	2	2	salmon	7	259	10-80	37.0	6	41.5	12	30	18	1	150?	2	3					3	Double-bunked set
XXXIII 33 do (Heceta Light bears S. 76° E. (true) distant 32.1 miles)	5689	Sept. 1	87	Atty shale, hrd. M.; fne. blk. S. 1 basket (cup) sponge (do)	2	2	salmon	3	165	40-80	55.0	3	55.0	7	2	6		2	31	5						Double-bunked set Black cod averaged 16 lbs., 33-36 in. long.
XXXIV 34 Off Newport (Mugu Light bears N. 63° E. (true) distant 20.7 miles)	5706	Sept. 2	63	crs. gy. S.; fne G.; blk. Sh.	2	2	salmon	9	289	16-64	32.1	9	32.1	7	6					13				5	Double-bunked set 1 silver salmon taken on gear	
XXXV 35 Off Cascade Head (Cape Kiwanda bears N. 25 1/2° E. (true) distant 13.8 miles)	5731	Sept. 3	45	fne. gy. S.	2	2	salmon	1	57	57				10	4						3			2	Double-bunked set	
XXXVI 36 Off Tillamook. (Cape Meares Light bears S. 25° E. (true) distant 9.4 miles)	5743	Sept. 4	43	fne. gy. S.	2	2	salmon	2	25	9-16	12.5	1	16	6	2	3				4				1	Double-bunked set 1 arrow-toothed halibut taken on gear	
XXXVII 37 do (Tillamook Light bears N. 43 1/2° E. (true) distant 8.2 miles)	5751	Sept. 4	56	fne. gy. S.	2	2	salmon							2	4					1				1	Double-bunked set	
XXXVIII 38 Off Gray's Harbor. (Cape Shoalwater Light bears S. 49° E. (true) distant 20.9 miles)	5771	Sept. 5	38	fne. G.; crs. G. 3 anemones (do)	4	2	salmon							1	1			1								1 silver salmon taken on gear

Table II

100 R



# Table of Trials for Scallops

Table of Trials for Scallops															Flounder taken during trial.					
No. of Trial	Position	Ref. Sta.	Date	Time of Day	Depth fms	Bottom	Apparatus	Haul			Scallops Taken			Citharichthys sordidus	Eopsetta jordanii	Glyptocephalus zachirus	Lyopsetta exilis	Parophrys vetulus	Psettichthys melanostictus	Addenda.
								Length	Direction	Duration	Large 4 1/2 - 6"	Small 2 1/2 - 4"	Dead Valves							
I	off Newport																			
II	approximately as located on chart	XV	Set No. XV (3b) July 20	9:55 a.m.	38	crs. gy. S.	Oyster Dredge			20 mins										1 large jelly fish
III	do	"	do do do	10:35 "	do	do	do			30 "	1									1 (6 in) living scallop brought up on hand line during this haul. several worm tubes.
IV	do	XVII	Set No. XVII (5) July 24	11:00 "	38-44	do	do			15 "	1									= 6 inch.
V	do		do do do	11:30 "	do	do	do			15 "										
VI	do		do do do	12:00 N.	do	do	do			30 "										
VII	do	XXII	Set No. XXII (10) Aug. 6	10:45 a.m.	35	do	do			45 "										
VIII	do		do do do	12:30 p.m.	do	do	do			1 hr.										large scallop = 7 inch small " = 3 "
IX	do		do do do	1:40 do	do	do	do			15 mins	1	1								1 starfish and worm tubes.
X	Yaquina Light bears N 62° E. (true), distant 6.4 miles	H. 5714	Sept. 2	1:45 p.m.	33	do	do	1 mi.	S 12° E.	17 1/2 mins				10	2					Hermit crabs, Algae, Worm tubes, Starfishes
XI	do do do N. 77 1/2° E. do, do 8.0 "	H. 5715	do	3:00 "	42	crs. gy. S. fine G.	9 ft. Ag.	do	S	19 "				60	1					Worm tubes, Algae, Molluscs, 1 Brillestar, 1 Tomcod, 1 smelt, 7 young black cod, 13 starfish, barandes, 1 nudibranch, dead shells, 1 crab + 1 hermit.
XII	do do do S 84° E. do, do 5.1 "	H. 5716	do	4:07 "	34	crs. gy. S.	do	do	S 13° W	17 "				90	2					3 starfish, 1 leach, 100s. Polynices egg case.
XIII	do do do S 80° E. do do 2.8 "	H. 5717	do	5:05 "	28	do	Oyster Dredge	0.7 miles	S	15 "										1 shark egg case, 1 Polynices egg case, 1 living shell, 12 hermit crabs, 5 starfish, several pennatulids, 1 dead Schizothaerus valve.
XIV	do do do N. 75° E do do 4.0 "	H. 5718	do	5:53 "	33	do	do	1 mile	S 67° E.	15 1/2 "				27	1					28 starfish, anemones, crustaceans, worm tubes, molluscs, worms, 15 starfish, 1 dead Schizothaerus valve.
XV	off Cascade Head																			
XVI	Cape Kiwanda bears N. 31° E (true) distant 12.2 miles	H. 5732	Sept. 3	11:45 a.m.	50	fine gy. S.	do	do	S 62° E	20 1/2 mins	30	20	28		24					2 C. magister (crabs), 1 Rajabiodonta, 1 starfish, 1 anemone, 1 young black cod, 1 nudibranch.
XVII	do do do N. 22° E. do, do 10.5 do	H. 5733	do	12:50 p.m.	32	do	do	do	S 24° E	15 mins		3		3	1	8	1	2	4	
XVIII	do do do N. 20 1/2° E. do, do 13.5 do	H. 5734	do	2:28 "	30	crs. gy. S. fine G.	do	do	do	20 mins				1		3				
XIX	do do do N. 34° E. do, do 10.1 do	H. 5735	do	3:40 "	42	crs. gy. S.	do	do	do	20 mins	2	13								

35 37 19 30 12 1 47 95



Table III